ORDER NO. SD7809-1445

Service Manual

SA-300L/K

FM/MW/LW 3 BAND STEREO RECEIVER

SA-300L
(D), (XSW), (XGF), (XE)

SA-300LK
(D), (XSW)

* The models SA-300L (D) and SA-300LK (D) are available in Scandinavia and European only.
* The models SA-300L (XSW) and SA-300LK (XSW) are available in Switzerland only.
* The model SA-300L (XGF) is available in France only.
* The model SA-300L (XE) is available in United Kingdom only.

- Cabinet colour differs according to destination.
- SA-300LK is different in appearance and colour tone. (See to page 13)

TECHNICAL SPECIFICATIONS
Specifications are subject to change without notice for further improvement.

[DIN 45 500]

AMPLIFIER SECTION

1 kHz continuous power output		
both channels driven		2 x 40 W (4Ω), 2 x 38 W (8Ω)
40 Hz ~ 16 kHz continuous power output		
both channels driven		2 x 37 W (4Ω), 2 x 35 W (8Ω)
20 Hz ~ 20 kHz continuous power output		
both channels driven		2 x 35W (8Ω)
Power bandwidth		
both channels driven, −3 dB		10 Hz ~ 25 kHz (4Ω)
Total harmonic distortion		
rated power at 1 kHz		0.04% (4Ω, 8Ω)
rated power at 40 Hz ~ 16 kHz		0.04% (4Ω, 8Ω)
rated power at 20 Hz ~ 20 kHz		0.04% (8Ω)
half power at 20 Hz ~ 20 kHz		0.025% (8Ω)
half power at 1 kHz		0.009% (8Ω)
−26 dB power at 1 kHz		0.04% (4Ω)
50 mW power at 1 kHz		0.2% (4Ω)
Intermodulation distortion		
rated power at 250 Hz: 8 kHz = 4:1, 4Ω		0.04%
rated power at 60 Hz: 7 kHz = 4:1, SMPTE, 8Ω		0.04%
Residual hum & noise		0.6mV
Damping factor		16 (4Ω), 32 (8Ω)
Input sensitivity and impedance		
PHONO		2.5 mV/47 kΩ
AUX		150 mV/33 kΩ
PLAYBACK (TAPE 1), REC/PLAY input		180 mV/39 kΩ
PLAYBACK (TAPE 2)		150mV/33 kΩ
PHONO maximum input voltage (1 kHz, RMS)		130 mV
S/N		
rated power at 4Ω	**PHONO**	70 dB (IHF, A: 78 dB)
	AUX	88 dB (IHF, A: 95 dB)
−26 dB power at 4Ω	**PHONO**	68 dB, **AUX** 77 dB
50 mW power at 4Ω	**PHONO**	64 dB, **AUX** 65 dB
Frequency response	**PHONO**	RIAA standard curve ±0.5 dB
	AUX	20 Hz ~ 20 kHz, ± 0.5 dB
		10 Hz ~ 30 kHz, −1 dB
Tone controls	**BASS**	50 Hz, +10 dB ~ −10 dB
	TREBLE	10 kHz, +10 dB ~ −10 dB
LOW filter		100 Hz, −6 dB/oct.
HIGH filter		7 kHz, −6 dB/oct.
Loudness control (volume at −30 dB)		50 Hz, +9 dB
Output voltage	**REC OUT (TAPE 1, 2)**	150 mV
	REC/PLAY output	30 mV
Channel balance (250 Hz ~ 6300 Hz), AUX		±1.0 dB
Channel separation at 1 kHz, AUX		55 dB
Headphones output level and impedance		400 mV/330Ω
Load impedance	**MAIN or REMOTE**	4 ~ 16Ω
	MAIN + REMOTE	8 ~ 16Ω

FM TUNER SECTION

Frequency range		88 ~ 108 MHz
Antenna impedance		300Ω (balanced), 75Ω (unbalanced)
Sensitivity (±40 kHz deviation)		
S/N 30 dB		1.9μV (300Ω), 1.3μV (75Ω)
S/N 26 dB		1.7μV (300Ω), 1.2μV (75Ω)
S/N 20 dB		1.5μV (300Ω), 0.9μV (75Ω)
IHF usable sensitivity		1.9μV (IHF '58)
IHF S/N 46 dB stereo quieting sensitivity		22μV (75Ω)
Total harmonic distortion	**MONO**	0.15%
	STEREO	0.3%
S/N (±40kHz deviation)	**MONO**	60 dB (IHF: 75 dB)
	STEREO	58 dB (IHF: 70 dB)
Frequency response		20Hz ~15 kHz, $^{+1}_{-2}$dB
		20 Hz ~ 14 kHz, ±1.5 dB
Alternate channel selectivity		70 dB
Capture ratio		1.2 dB
Image rejection at 98 MHz		70 dB
IF rejection at 98 MHz		90 dB
Spurious response rejection at 98 MHz		80 dB
AM suppression		55 dB
Stereo separation	**1 kHz**	45 dB, **10 kHz** 35 dB
Leak carrier	**19 kHz**	−33 dB (−40 dB, IHF)
	38 kHz	−48 dB (−50 dB, IHF)
Limiting point		1.2μV
Bandwidth	**IF amplifier**	180 kHz
	FM demodulator	1000 kHz
Channel balance (250 Hz ~ 6300 Hz)		±1.5 dB

MW TUNER SECTION

Frequency range	525 ~ 1605 kHz
Sensitivity (S/N 20 dB)	30μV, 300μV/m
Selectivity	30 dB
Image rejection at 1000 kHz	45 dB
IF rejection at 1000 kHz	40 dB

LW TUNER SECTION

Frequency range	145 ~ 350 kHz
Sensitivity (S/N 20 dB)	45 μV
Selectivity	40 dB
Image rejection at 250 kHz	45 dB
IF rejection at 250 kHz	30 dB

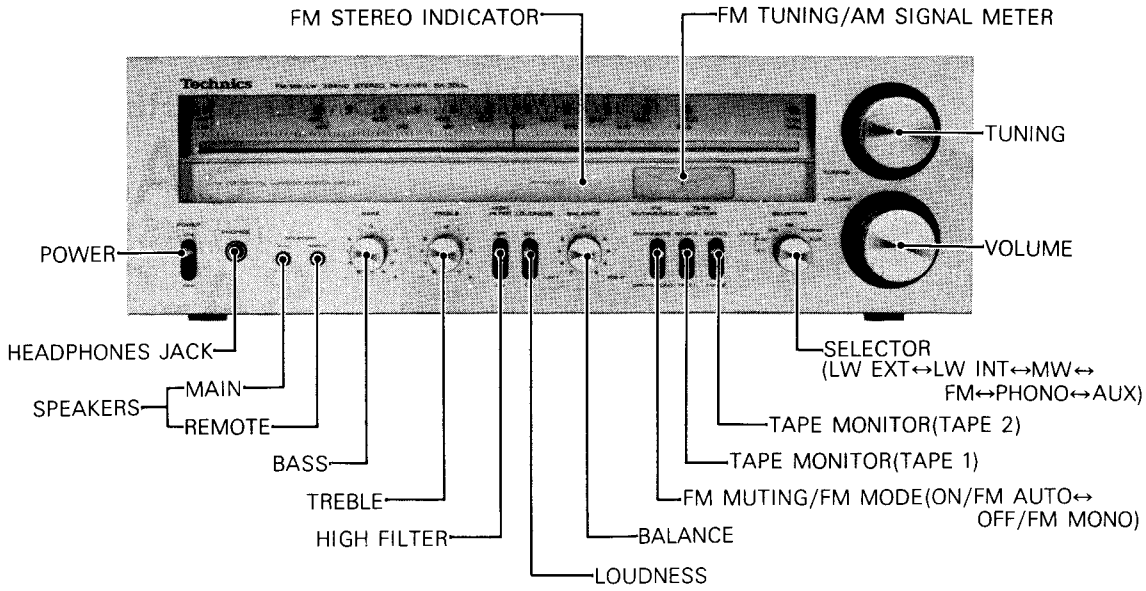
GENERAL

Power consumption	410 W
Power supply (50 Hz/60 Hz)	110V/120V/220V/240V
Dimensions (W x H x D)	430 x 142 x 300 mm
	(16$^{9}/_{16}$" x 5$^{5}/_{8}$" x 11$^{13}/_{16}$")
Weight	7.7 kg (17 lb.)

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

■ LOCATION OF CONTROLS (Front Panel)



TECHNISCHE DATEN [DIN 45 500]

Spezifikationen können infolge von Verbesserungen ohne Ankündigung geändert werden.

VERSTÄRKERTEIL

RMS-Dauertonleistung bei 1 kHz	
beide Kanäle zusammen ausgesteuert	2 x 40 W (4Ω) 2 x 38 W (8Ω)
RMS-Dauertonleistung bei 40 Hz ~ 16 kHz	
beide Kanäle zusammen ausgesteuert	2 x 37 W (4Ω) 2 x 35 W (8Ω)
RMS-Dauertonleistung bei 20 Hz ~ 20 kHz	
beide Kanäle zusammen ausgesteuert	2 x 35W (8Ω)
Leistungsbandbreite	
beide Kanäle zusammen ausgesteuert, –3 dB	10 Hz ~ 25 kHz (4Ω)
Harmonische Verzerrungen	
Nennausgangsleistung bei 1 kHz	0,04% (4Ω, 8Ω)
Nennausgangsleistung bei 40 Hz ~ 16 kHz	0,04% (4Ω, 8Ω)
Nennausgangsleistung bei 20 Hz ~ 20 kHz	0,04% (8Ω)
Halber Ausgangsleistung bei 20 Hz ~ 20 kHz	0,025% (8Ω)
Halber Ausgangsleistung bei 1 kHz	0,009% (8Ω)
–26 dB Ausgangsleistung bei 1 kHz	0,04% (4Ω)
50 mW Ausgangsleistung bei 1 kHz	0,2% (4Ω)
Intermodulationsverzerrung	
Nennausgangsleistung bei 250 Hz: 8 kHz = 4:1, 4Ω	0,04%
Nennausgangsleistung bei 60 Hz: 7 kHz = 4:1, 8Ω	0,04%
Hum & Noise	0,6 mV
Dämpfungsfaktor	16 (4Ω), 32 (8Ω)
Eingangsempfindlichkeit & Impedanz	
PHONO	2,5 mV/47 kΩ
AUX	150 mV/33 kΩ
PLAYBACK (TAPE 1), REC/PLAY Eingang	180 mV/39 kΩ
PLAYBACK (TAPE 2)	150 mV/33 kΩ
PHONO Maximale Eingangsspannungen (1 kHz RMS)	130mV
Fremdspannungsabstand	
Nennausgangsleistung bei 4Ω PHONO	70 dB (IHF, A: 78 dB)
AUX	88 dB (IHF, A: 95 dB)
–26 dB Ausgangsleistung bei 4Ω PHONO	68 dB
AUX	77 dB
50 mW Ausgangsleistung bei 4Ω PHONO	64 dB
AUX	65 dB
Frequenzgang PHONO	RIAA Standardkurve ±0,5 dB
AUX	20 Hz ~ 20 kHz, ±0,5 dB 10 Hz ~ 30 kHz, –1 dB
Klangregler BÄSSE	50 Hz, +10 dB ~ –10 dB
HÖHEN	10 kHz, +10 dB ~ –10 dB
Höhenfilter	7 kHz, –6 dB/oct.
Gehörgerechte Lautstärkekorrektur (Lautstärke bei –30 dB)	50 Hz, +9 dB
Ausgangsspannungen REC OUT (TAPE 1, 2)	150 mV
REC/PLAY Aufnahme	30 mV
Kanalabweichung (250Hz ~ 6300Hz), AUX	±1,0 dB
Kanaltrennung bei 1 kHz, AUX	55 dB
Kopfhörerpegel und Ausgangsimpedanz	440 mV/330Ω
Endimpedanz MAIN oder REMOTE	4 ~ 16Ω
MAIN und REMOTE	8 ~ 16Ω

UKW-TUNERTEIL

Empfangsbereich	88 ~ 108 MHz
Antennenanschluss	300Ω (symmetrisch), 75Ω (asymmetrisch)
Empfindlichkeit (±40 kHz Hub)	
30 dB Fremdspannungsabstand	1,9μV (300Ω), 1,3μV (75Ω)
26 dB Fremdspannungsabstand	1,7μV (300Ω), 1,2μV (75Ω)
20 dB Fremdspannungsabstand	1,5μV (300Ω), 0,9μV (75Ω)
IHF Empfindlichkeit	1,9μV (IHF '58)
46 dB Fremdspannungsabstand Empfindlichkeit, IHF	22μV (75Ω), STEREO
Harmonische Verzerrung MONO	0,15%
STEREO	0,3%
Fremdspannungsabstand (±40 kHz Hub)	
MONO	60 dB (IHF: 75 dB)
STEREO	58 dB (IHF: 70 dB)
Frequenzgang	20 Hz ~ 14 KHz, $^{+1}_{-2}$ dB 20 Hz ~ 14 kHz, ±1,5 dB
Selektivität	70 dB
Gleichwellen-Selektion	1,2 dB
Spiegelselektion bei 98 MHz	70 dB
ZF-Festigkeit bei 98 MHz	90 dB
Unselektivitätsfestigkeit bei 98 MHz	80 dB
AM-Unterdrückung	55 dB
Stereo Übersprechdämpfung 1 kHz	45 dB, **10 kHz** 35 dB
Trägerrest 19 kHz	–33 dB (–40 dB, IHF)
38 kHz	–48 dB (–50 dB, IHF)
Begrenzung, Einsatzpunkt	1,2μV
Bandbreite ZF-Verstärker	180 kHz
UKW-Demodulator	1000 kHz
Kanalabweichung (250 Hz ~ 6300 Hz)	±1,5 dB

MW-TUNERTEIL

Empfangsbereich	525 ~ 1605 kHz
Empfindlichkeit (20dB Rauschabstand)	30μV, 300μV/m
Selektivität	30 dB
Spiegelselektion bei 1000 kHz	45 dB
ZF-Festigkeit bei 1000 kHz	40 dB

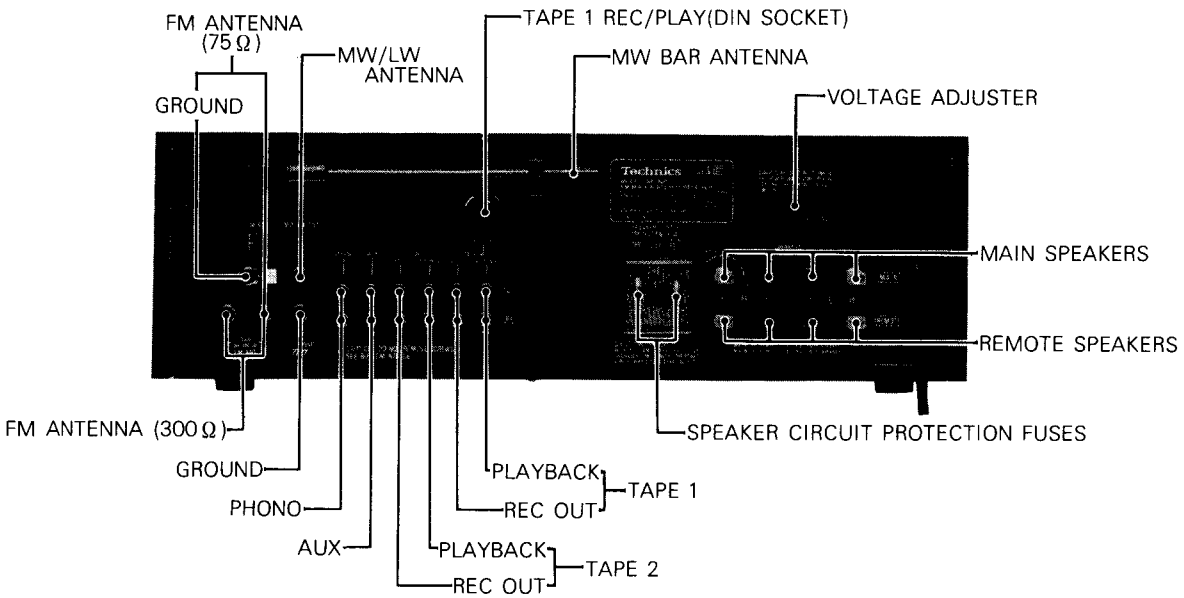
LW-TUNERTEIL

Empfangsbereich	145 ~ 350 kHz
Empfindlichkeit (20 dB Rauschabstand)	45 μV
Selektivität	40 dB
Spiegelselektion bei 250 kHz	45 dB
ZF-Festigkeit bei 250 kHz	30 dB

ALLGEMEINE DATEN

Leistungsaufnahme	410 W
Netzspannung umschaltbar (50 Hz/60Hz)	110V/120V/220V/240V
Abmessungen (B x H x T)	430 x 142 x 300mm
Gewicht	7,7 kg

■ LOCATION OF CONTROLS (Rear Panel)



CARACTERISTIQUES TECHIQUES

Sujet à changement sans préaris.

[DIN 45 500]

SECTION AMPLIFICATEUR

Puissance RMS (continue) à 1 kHz
pour l'ensemble des canaux excités 2 x 40 W (4Ω)
2 x 38 W (8Ω)
Puissance RMS (continue) à 40 Hz ~ 16 kHz
pour l'ensemble des canaux excités 2 x 37 W (4Ω)
2 x 35 W (8Ω)
Puissance RMS (continue) à 20 Hz ~ 20 kHz
pour l'ensemble des canaux excités 2 x 35 W (8Ω)
Largeur de bande de puissance
pour l'ensemble des canaux excités, –3 dB 10 Hz ~ 25 kHz (4Ω)
Distorsion harmonique totale
pour la puissance mesurée à 1 kHz 0.04% (4Ω, 8Ω)
pour la puissance mesurée à 40 Hz ~ 16 kHz 0.04% (4Ω, 8Ω)
pour la puissance mesurée à 20 Hz ~ 20 kHz 0.04% (8Ω)
pour la demi-puissance mesurée à 20 Hz ~ 20 kHz 0.025% (8Ω)
pour la demi-puissance mesurée à 1 kHz 0.009% (8Ω)
pour une puissance mesurée de –26 dB, 1 kHz 0.04% (4Ω)
pour une puissance mesurée de 50 mW, 1 kHz 0.2% (4Ω)
Distorsion d'intermodulation
pour la puissance mesurée à 250 Hz: 8 kHz=4:1, 4Ω 0.04%
pour la puissance mesurée à 60 Hz: 7 kHz=4:1, 8Ω 0.04%
Tension résiduelle de bruit 0.6mV
Facteur d'amortissement 16 (4Ω), 32 (8Ω)
Sensibilité & impédance d'enltrée
PHONO 2.5 mV/47 kΩ
AUX 150 mV/33 kΩ
PLAYBACK (TAPE 1), REC/PLAY entrée 180 mV/39 kΩ
PLAYBACK (TAPE 2) 150 mV/33 kΩ
Voltage d'entrée maximum (PHONO, 1 kHz, RMS) 130 mV
Rapport signal/bruit
pour la puissance nominale, 4Ω
PHONO 70 dB (IHF, A: 78 dB)
AUX 88 dB (IHF, A: 95 dB)
pour une sortie de –26 dB, 4Ω PHONO 68 dB **AUX** 77 dB
pour une sortie de 50 mW, 4Ω PHONO 64 dB **AUX** 65 dB
Réponse de fréquence
PHONO Courbe standard RIAA ±0.5 dB
AUX 20 Hz ~ 20 kHz, ±0.5 dB
10 Hz ~ 30 kHz, –1 dB
Réglage de la tonalité
BASS (graves) 50 Hz, +10 dB ~ –10 dB
TREBLE (aigus) 10 kHz, +10 dB ~ –10 dB
Filtre d'aigu 7 kHz, –6 dB/oct.
Correction physiologique (volume à –30 dB) 50 Hz, +9 dB
Tension de sortie REC OUT (TAPE 1, 2) 150 mV
REC/PLAY (sortie) 30 mV
Equilibrage de canaux (250 Hz ~ 6300 Hz), AUX ±1,0 dB
Ecart canaux à 1 kHz, AUX 55 dB
Niveau des écouteurs et impédance de sortie 440 mV/330Ω
Impédance de charge PRINCIPALE ou ELOIGNEE 4 ~ 16Ω
PRINCIPALE + ELOIGNEE 8 ~ 16Ω

SECTION TUNER FM

Gamme reçue 88 ~ 108 MHz
Impédance d'antenne 300Ω (symétrique) 75Ω (asymétrique)
Sensibilité (± 40 kHz déviation)
Signal/bruit 30 dB 1,9μV (300Ω), 1,3μV (75Ω)
Signal/bruit 26 dB 1,7μV (300Ω), 1,2μV (75Ω)
Signal/bruit 20 dB 1,5μV (300Ω), 0,9μV (75Ω)
IHF Sensibilité 1,9μV (IHF '58)
IHF Sensibilité pour 46 dB 22μV (75Ω), STEREO
Distorsion harmonique totale
MONO 0.15%
STEREO 0,3%
Signal/bruit(±40 kHz déviation) MONO 60 dB (IHF: 75 dB)
STEREO 58 dB (IHF: 70 dB)
Réponse de fréquence 20 Hz ~ 15 kHz, $^{+1}_{-2}$ dB
20 Hz ~ 14 kHz, ±1,5 dB
Sélectivite alternée par canal 70 dB
Taux de capture 1,2 dB
Réjection de fréquence image à 98 MHz 70 dB
Réjection FI à 98 MHz 90 dB
Réjection de réception non sélective à 98 MHz 80 dB
Suppression AM 55 dB
Séparation stéréophonique 1 kHz 45 dB, **10 kHz** 35 dB
Courant porteur de dispersion 19 kHz –33 dB (–40 dB, IHF)
38 kHz –48 dB (–50 dB, IHF)
Point limite 1,2μV
Largeur de bande Amplificateur FI 180 kHz
Démodulateur FM 1000 kHz
Equilibrage de canaux (250 Hz ~ 6300 Hz) ±1,5 dB

SECTION TUNER PO (MW)

Gamme reçue 525 ~ 1605 kHz
Sensibilité (Rapport S/B 20 dB) 30μV, 300μV/m
Sélectivité 30 dB
Réjection de fréquence image à 1000 kHz 45 dB
Réjection FI à 1000 kHz 40 dB

PARTIE TUNER GO (LW)

Gamme reçue 145 ~ 350 kHz
Sensibilité (Rapport S/B 20 dB) 45μV
Sélectivité 40 dB
Réjection de fréquence image à 250 kHz 45 dB
Réjection FI à 250 kHz 30 dB

GENERALITES

Consommation 410 W
Alimentation (50 Hz/60 Hz) 110V/120V/220V/240V
Dimensions (L x H x Pr) 430 x 142 x 300 mm
Poids 7,7 kg

Be sure to make the adjustments of MW and LW in the order of step No.

■ ALIGNMENT INSTRUCTIONS ENGLISH

Notes:
1. Loudness switch ..... OFF
2. Band selector switch ..... MW/LW EXT/LW INT
   FM (FM Alignment)
3. FM muting/mode switch ..... OFF/FM MONO
4. Speaker switch ..... ON
5. Tape monitor switch ..... SOURCE
6. Maintain line voltage at rated voltage.
7. Output of signal generator should be no higher than necessary to obtain an output reading

	SIGNAL GENERATOR		DIAL SETTING	INDICATOR (AC VTVM or SCOPE) (DISTORTION METER)	ADJUSTMENT POINTS	REMARKS
	CONNECTION	FREQUENCY				
	MW/LW-IF ALIGNMENT					
1	High side through 0.001 μF to **AM** antenna trimmer terminal. Common to chassis.	455kHz (30% Mod. with 400Hz) (For United Kingdom to 470kHz)	Point of non-inter ference	Connect VTVM or scope to speaker terminals of receiver.	T201 (1st IFT) Z201 (2nd IFT)	●Adjust for maximum output.
	MW-RF ALIGNMENT					
2	Fashion loop of several turns of wire and radiate signal into loop of receiver	600kHz (30%Mod. with 400Hz)	600kHz	Connect VTVM or scope to speaker terminals of receiver	L203 (MW OSC Coil) L201 (MW ANT Coil)	●Move L201 as shown in "alignment points" ●Adjust for maximum output. Adjust ferrite core of L201 by screw driver.
3	Fashion loop of several turns of wire and radiate signal into loop of receiver	1500kHz (30%Mod.) with 400Hz)	1500kHz	Connect VTVM or scope to speaker terminals of receiver.	CT5 (MW OSC Trimmer) CT4 (MW ANT Trimmer)	●Adjust for maximum output. ●Repeat steps (2) and (3).
	LW INT-RF ALIGNMENT					
4	Fashon loop of several turns of wire and radiate signal into loop of receiver.	145kHz (30% Mod. with 400Hz)	145kHz	Connect VTVM or scope to speaker terminals of receiver.	L202 (LW OSC Coil) L253 (LW INT ANT Coil)	● Adjust for maximum output. ● Adjust L253 by moving coil bobbin along ferrite core.
5	Fashon loop of several turns of wire and radiate signal into loop of receiver.	350kHz (30% Mod. with 400Hz)	350kHz	Connect VTVM or scope to speaker terminals of receiver.	CT253 (LW OSC Trimmer) CT252 (LW INT ANT Trimmer)	● Adjust for maximum output. Repeat steps (4) and (5).
	LW EXT-RF ALIGNMENT					
6	High side through 0.001 μF to LW antenna terminal.	145kHz (30% Mod. with 400Hz)	145kHz	Connect VTVM or scope to speaker terminals of receiver.	L251 (LW EXT ANT Coil)	● Adjust for maximum output.
7	High side through 0.001 μF to LW antenna terminal.	350kHz (30% Mod. with 400Hz)	350kHz	Connect VTVM or scope to speaker terminals of receiver.	CT251 (LW EXT ANT Trimmer)	● Adjust for maximum output. Repeat steps (6) and (7).
	FM-IF ALIGNMENT					
8		No Signal	Point of non-inter ference.	Tuning meter of set.	T101 (DISCRI IFT) (A) Orange Core	●FM muting/mode switch to ON/FM AUTO. ●Adjust for center position of tuning meter.
	FM-RF ALIGNMENT					
9	Connect to FM 300Ω antenna terminal through FM dummy antenna.	90MHz (100%Mod. with 400Hz)	90MHz	Connect scope to speaker terminals of receiver.	L5 (OSC Coil) L3 (RF-DET Coil) L1 (ANT Coil)	●FM muting/mode switch to OFF/FM MONO. ●Adjust for maximum amplitude and symmetrical curve. (Refer to fig. 1).
10	Connect to FM 300Ω antenna terminal through FM dummy antenna.	106MHz (100%Mod. with 400Hz)	106MHz	Connect scope to speaker terminals of receiver.	CT3 (OSC Trimmer) CT2 (RF DET Trimmer) CT1 (ANT Trimmer)	●Adjust for maximum amplitude and symmetrical curve. ●Repeat steps (9) and (10).
	FM MONO DISTORTION ALIGNMENT					
11	Connect to FM 300Ω antenna terminal through FM dummy antenna. Apply 60 dB to set.	100MHz (100%Mod. with 400Hz)	100MHz	Connect distortion meter to speaker terminals of receiver	T101 (DISCRI IFT) (B) Green Core	●Adjust for minimum distortion of left output. ●Repeat steps (8) and (11).
	FM MPX PILOT ALIGNMENT					
12	Using a frepuency counter: **1** 100MHz Non-modulated mono signal applied to set. (Apply 60dB) **2** FM muting/mode switch to "ON/FM AUTO" **3** Connect frequency counter to **TP301** through resistor (100kΩ). **4** Adjust **VR301** to 19kHz. ±30Hz.			Using alternate system: **1** Apply stereo signal from generator or stereo station to receiver **2** Adjust **VR301** until stereo indicator lights up. Cement arm of **VR301** as shown in fig. 2.		

Notes:
1. Stereo modulator ..... ● Connect stereo modulator output to EXT MOD terminal of signal generator.
   ● Pilot signal modulation to "10%"
2. FM signal generator ..... ● Frequency approximatery 100MHz/Output level to "72dB (IHF)"
   ● Modulation mode to "FM"
3. Selector switch to "FM"
4. FM muting/mode switch to "ON/FM AUTO"

	FM SIGNAL GENERATOR CONNECTION	STEREO MODULATOR MODE & MOD. RATE	INDICATOR (AC VTVM)	ADJUSTMENT POINTS	REMARKS
	FM STEREO SEPARATION ALIGNMENT				
13	FM 300Ω antenna terminals through FM dummy antenna.	(1kHz 30% Modulation) MODE **L** (and R) Pilot signal to "ON"	Connect VTVM to speaker terminals through low pass filter.	VR302	●Tuning at 100MHz. ●Make adjustment so that, when the antenna input is subjected to **L** modulation (or **R** modulation). **R** channel output (or **L** channel output) becomes minimum.

■ FM/MW/LW TUNER AND EQUALIZER PRINTED CIRCUIT BOARD

Earth (Ground) Lines

REC / PLAY

IC401,402
SVITA7129P
EQUALIZER AMP

1	2V	5	0.69V
2	0.65V	6	19.5V
3	0.08V	7	36V
4	0V		

TAPE 1 PLAYBACK
TAPE 1 REC OUT
TAPE 2 PLAYBACK
TAPE 2 REC OUT
AUX
PHONO
AM ANT
GND
FM ANT 300Ω
FM ANT 75Ω

FM OSC CT3 (CV3)
AM OSC CT5 (CV5)
FM DET CT2 (CV2)
AM ANT CT4 (CV4)
FM ANT CT1 (CV1)

SUPI4930A

METER
S1-12
FM MUTING MODE
TAPE MONITOR
SELECTOR
VOLUME
FM STEREO INDICATOR

Blue
Black
Yellow
Orange
Brown
Black
Gray
Blue
White
(L253) LW ANT
MW ANT (L201)

IC301
AN303
FM IF AMP

IC302
2SA721
RF AMP

■ INSTRUCTIONS D'ALIGNEMENT — FRANÇAIS

Veuillez régler PO et GO par ordre des numéros de procédé.

Notes:
1. Commutateur de physiologique (loudness) . . . . . .OFF
2. Sélecteur de gamme . . . . . {MW/LW INT/LW EXT / FM (Alignement FM)
3. Commutateur de silencieux . . . . . OFF/FM MONO
4. Commutateur d'enceintes . . . . . ON
5. Commutateur de contrôle auditif . . . . . SOURCE (relâchée)
6. Conserver la tension du secteur à la tension nominale.
7. Le signal du générateur ne doit pas être plus élevé qu'il n'est nécessaire à obtenir une lecture en sortie.

	AM/FM GENERATEUR		AIGUILLE SUR LE CADRAN	INDICATEUR(C.A. VOLTMETRE ELECTRONIQUE OSCILLOSCOPE OU DISTORSIONMETRE)	POINTS DE REGLAGE	OBSERVATIONS
	BRANCHMENT	FREQUENCE				
	ALIGNEMENT FI-MW (PO)/LW (GO)					
1	Côté chaud, à travers 0.001μF, sur le trimmer de l'antenne AM, commum an shâssis	455kHz (modulé à 30% par 400Hz)	Point sans signal	Branchez un voltmetre électronique ou un oscilloscope sur les bornes de haut-parleur de l'ampli-tuner	T201 (1 transfo FI) Z201 (2 transfo FI)	• Réglez au maximum de signal de sortie.
	ALIGNMENT RF-MW (PO)					
2	Faire une boucle de quelgues tours et rayonner le signal dans le cadre du l'ampli-tuner	600kHz (modulé à 30%) par 400Hz)	600kHz	Branchez un voltmètre électronique ou un oscilloscope sur les bornes de haut-parleur de l'ampli-tuner	L203 (bobine OSC PO) L201 (bobine ANT PO)	• Réglez au maximum de signal de sortie. Régler le noyau ferrite de L201 à l'aide d'un tournevis.
3	Faire une boucle de quelgues tours et rayonner le signal dans le cadre du l'ampli-tuner.	1500kHz (modulé à 30% par 400Hz)	1500kHz	Branchez un voltmètre électronique ou un oscilloscope sur les bornes de haut-parleur de l'ampli-tuner	CT5 (trimmer OSC PO) CT4 (trimmer ANT PO)	• Réglez au maximum de signal de sortie. • Recommencez les étapes (2) et (3).
	ALIGNEMENT RF-LW (GO) INT					
4	Faire une boucle de quelgues tours et rayonner le signal dans le cadre du l'ampli-tuner.	145kHz (modulé à 30% par 400Hz)	145kHz	Branchez un voltmètre électronique ou un oscilloscope sur les bornes de haut-parleur de l'ampli-tuner.	L202 (bobine OSC LW) L253 (bobine ANT LW INT)	• Réglez au maximum de signal de sortie. Réglez L253 en déplaçant la bobine le long du noyau de ferrite.
5	Faire une boucle de quelgues tours et rayonner le signal dans le cadre du l'ampli-tuner.	350kHz (modulé à 30% par 400Hz)	350kHz	Branchez un voltmètre électronique ou un oscilloscope sur les bornes de haut-parleur de l'ampli-tuner.	CT253 (trimmer OSC LW) CT252 (trimmer ANT LW INT)	• Réglez au maximum de signal de sortie. • Recommencez les étapes (4) et (5).
	ALIGNEMENT RF-LW (GO) EXT					
6	Côté chaud, à travers 0.001μF, sur le de l'antenne LW.	145kHz (modulé à 30% par 400Hz)	145kHz	Branchez un voltmètre électronique ou un oscilloscope sur les bornes de haut-parleur de l'ampli-tuner.	L251 (bobine ANT LW EXT)	• Réglez au maximum de signal de sortie.
7	Côté chaud, à travers 0,001μF, sur le de l'antenne LW.	350kHz (modulé à 30% par 400Hz)	350kHz	Branchez un voltmètre électronique ou un oscilloscope sur les bornes de haut-parleur de l'ampli-tuner.	CT251 (trimmer ANT LW EXT)	• Réglez au maximum de signal de sortie. • Recommencez les étapes (6) et (7)
	ALIGNEMENT FI-FM					
8		Sans signal	point sans signal	Indicateur d'accord de l'appareil	T101 (Transfo FI discri.) [A]	• Commutateur de silencieux sur ON. • Réglez pour atteindre position médiane sur l'indicateur d'accord.
	ALIGNEMENT RF-FM					
9	Branchez sur la prise d'antenne FM à travers une antenne fictive FM.	90MHz (modulé à 100% par 400Hz)	90MHz	Branchez un voltmètre électronique ou un oscilloscope sur les bornes de haut-parleur de l'ampli-tuner	L5 (bobine OSC) L3 (bobine DET) L1 (bobine ANT)	• Commutateur de silencieux sur OFF. • Régler au maximum d'amplitude et de symétrie. (Voir fig. 1)
10	Branchez sur la prise d'antenne FM à travers une antenne fictive FM.	106MHz (modulé à 100% par 400Hz)	106MHz	Branchez un voltmètre électronique ou un oscilloscope sur les bornes de haut-parleur de l'ampli-tuner	CT3 (trimmer OSC) CT2 (trimmer DET) CT1 (trimmer ANT)	• Régler au maximum d'amplitude et de symétrie. (Voir fig. 1) • Recommencez les étapes (9) et (10)
	REGLAGE DE LA DISTORSION FM EN MONO					
11	Branchez sur la prise d'antenne FM à travers une antenne fictive FM.	100MHz (modulè à 100% par 400Hz)	100MHz	Branchez un distorsio métre sur les bornes de haut-parleur de l'appareil.	T101 (Transfo FI discri.) [B]	• Réglez au minimum d'indication du distorsiomètre. Recommencez les étapes (8) et (11).

ALIGNEMENT DU PILOTE MULTIPLEX FM

	Avec un fréquencemétre	Par un outre système
12	1. Signal mono 100 MHz non modulé appliqué à l'appareil. 2. Commutateur de silencieux sur "ON/FM AUTO" 3. Branchez le fréquencemètre sur **TP301** à travers une résistance de 100kΩ. 4. Réglez **VR301** sur 19kHz ±30Hz.	1. Appliquez à l'appareil un signal stéréo provenant d'un générateur ou de la réception d'un émetteur. 2. Réglez **VR301** jusqu à ce que l'indicateur de stéréophonic s'allume. Collez le curseur de **VR301** comme indiqué sur la fig. 2.

REGLAGE DE LA SEPARATION DES CANAUX

Notes:
1. Modulateur stéréo . . . . . Branchez sa sortie sur la prise EXT. MOD. du générateur.
   OSC interne . . . . . 1kHz Modulation du signal pilote 10%
2. Générateur de signal . . . . . Fréquence env. 100MHz, niveau de sortie 72dB (IHF), genre de modulation sur FM.
3. Commutateur de gamme . . . . FM 4. Commutateur de silencieux. . . . . ON/FM AUTO

	BRANCHEMENT DU GENERATEUR DE SIGNAL	MODE DU MODULATEUR STEREO ET TAUX DE MODULATION	INDICATEUR (VOLTMETRE ELECTRONIQUE OU OSCILLOSCOPE)	POINTS DE REGLAGE	OBSERVATIONS
13	Borne d'antenne FM à travers antenne fictive.	**Gauche** (et droite) à 30% de modulation.	Sur les bornes de haut-parleur à travers un filtre passe-bas.	VR302	• Réglez au minimum de sortie **droite** (et gauche)

■ ABGLEICHANWEISUNGEN — FÜR DEUTSCHLAND

Darauf achten, die Justierung von MW und LW in der Reihenfolge der Schrittnummer vorzunehmen.

Anmerkungen:
1. Loudness-Schalter . . . . . OFF
2. Bereichsschalter . . . . . MW/LW EXT/LW INT FM (FM Abgleich)
3. FM Muting/mode-Schalter . . . . . OFF/FM MONO
4. Lautsprecher-Schalter. . . . . ON
5. Tape/Monitor-Umschalter . . . . . SOURCE
6. Die Netzspannung auf ihren Sollwert einstellen.
7. Der Ausgang des Meßsenders darf nicht höher sein als unbedingt notwendig für eine gute Ablesung.

	AM/UKW MESSENDER		SKALENZEIGEREINSTELLUNG DES TUNER	ANZEIGE (Wechselstrom Röhrenvoltmeter oder Oszillograph ozw. Klirrfaktor-Meßgerät)	ABGLEICHSPUNKTE	BEMERKUNGEN
	ANSCHLUSS	FREQUENZ				
	MW/LW-ZF-ABGLEICH					
1	Heißes Ende des Meßsenders über einen 0.001μF Kondensator an den AM Antenneneingang schließen. Kaltes Ende an Masse.	455kHz (400Hz Modulat., 30%)	Kein Empfang	Röhrenvoltmeter oder Oszillograph über den Lautsprecher schließen.	T201 (1. IFT) Z201 (2. IFT)	• Auf max. Ausgang abgleichen.
	MW-HF-ABGLEICH					
2	Das Meßsendersignal induktiv in den Tuner speisen. Hierzu behelfsmäßig eine Rahmenantenne fertigen und an den Eingang schließen.	600kHz (400Hz Modulat., 30%)	600kHz	Röhrenvoltmeter oder Oszillograph über den Lautsprecher schließen.	L203 (MW Osc. Spule) L201 (MW. Ant. Spule)	• Auf max. Ausgang abgleichen. • Den Ferritkern von L201 mit einem Schraubendreher justieren.
3	Das Meßsendersignal induktiv in den Tuner speisen, Hierzu behelfsmäßig eine Rahmenantenne fertigen und an den Eingang schließen.	1500kHz (400Hz Modulat., 30%)	1500kHz	Röhrenvoltmeter oder Oszillograph über den Lautsprecher schließen.	CT5 (MW Osc. Trimmer) CT4 (MW Ant. Trimmer)	• Auf max. Ausgang abgleichen. • Schritt (2) und (3) sind zu wiederholen.
	LW INT-HF-ABGLEICH					
4	Das Meßsendersignal induktiv in den Tuner speisen. Hierzu behelfsmäßig eine Rahmenantenne fertigen und en den Eingang schließen.	145kHz (400Hz Modulat., 30%)	145kHz	Röhrenvolmeter oder Oszillograph über den Lautsprecher schließen.	L202 (LW Osc. Spule) L253 (LW INT Ant. Spule)	• Auf max. Ausgang abgleichen. • L253 wird abgleichen, in dem die Spule am Ferritstab entlanggeschoben wird.
5	Das Meßsendersignal induktiv in den Tuner speisen. Hierzu behelfsmäßig eine Rahmenantenne fertigen und en den Eingang schließen.	350kHz (400Hz Modulat., 30%)	350kHz	Röhrenvoltmeter oder Oszillograph über den Lautsprecher schließen.	CT253 (LW Osc. Trimmer) CT252 (LW INT Ant. Trimmer)	• Auf max. Ausgang abgleichen. • Schritt (4) und (5) sind zu wiederholen.
	LW EXT-HF-ABGLEICH					
6	Heißes Ende des Meßsenders über einen 0,001μF an den LW Antenneneingang schließen.	145kHz (400Hz Modulat., 30%)	145kHz	Röhrenvoltmeter oder Oszillograph über den Lautsprecher schließen.	L251 (LW EXT Ant. Spule)	• Auf max. Ausgang abgleichen.
7	Heißes Ende des Meßsenders über einen 0,001μF an den LW Antenneneingang schließen.	350kHz (400Hz Modulat., 30%)	350kHz	Röhrenvoltmeter oder Oszillograph über den Lautsprecher schließen.	CT251 (LW EXT Ant. Trimmer)	• Auf max. Ausgang abgleichen • Schritt (6) und (7) sind zu wiederholen.
	UKW ZF-ABGLEICH					
8		Kein Signal	Kein Empfang	Abstimmanzeige.	T101 (Diskriminator IFT) [A]	• FM Muting-Schalter auf ON stellen. • Den Abstimmungsanzeiger auf den zentrum Wert einstellen.
	UKW HF-ABGLEICH					
9	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	87,5MHz (400Hz Modulat., 100%)	87.5MHz (Frequenz Min.)	Röhrenvoltmeter oder Oszillograph über den Lautsprecher schließen.	L5 (Osc. Spule)	• FM Muting-Schalter auf OFF stellen. • Auf max. Ausgang abgleichen.
10	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	90MHz (400Hz Modulat., 100%)	90MHz	Röhrenvoltmeter oder Oszilograph über den Lautsprecher schließen.	L3 (Det. Spule) L1 (Ant. Spule)	• Auf max. Amplitude bei entsprechender Linearität abgleichen. (Vgl. Abb. 1)
11	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	106MHz (400Hz Modulat., 100%)	106MHz	Röhrenvoltmeter oder Oscillograph über den Loutsprecher schließen.	CT3 (Osc. Trimmer) CT2 (Det. Trimmer) CT1 (Ant. Trimmer)	• Auf max. Amplitude bei entsprechender Linearität abgleichen. (Vgl. Abb. 1) • Schritt (9), (10) und (11) sind zu wiederholen.
	ABGLEICH AUF MIN. VERZERRUNG IN STELLUNG UKW-MONO					
12	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	100MHz (400Hz Modulat., 100%)	100MHz	Klirrfaktor-Meßbrücke über den Lautsprecher schlieben.	T101 (Diskriminator IFT) [B]	• Auf min. Verzerrung auf der Klirrfaktor-Meßbürcke abgleichen. • Schritt (8) und (12) sind zu wiederholen.

UKW-STEREO-DEKODER-ABGLEICH

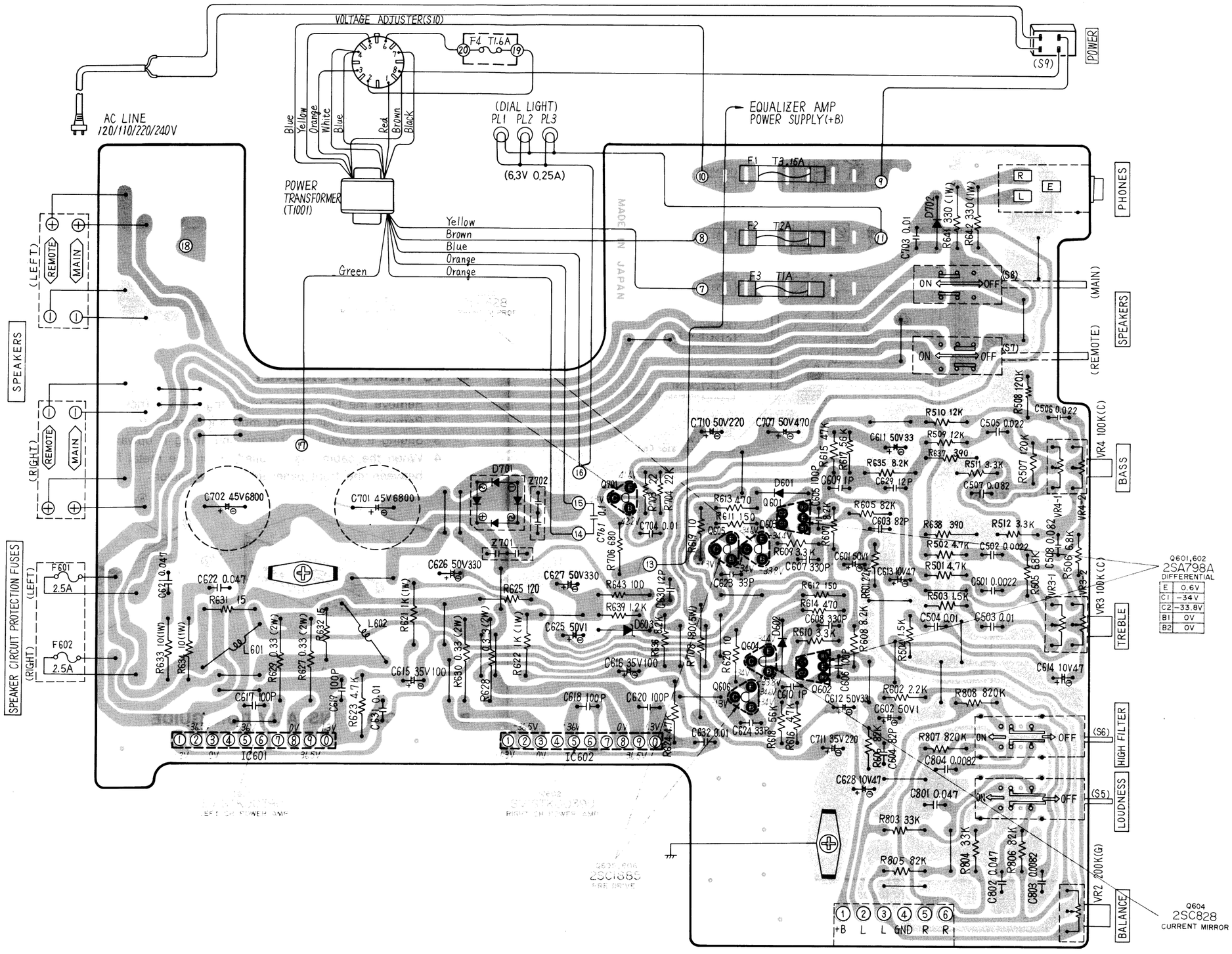
	Unter Verwendung eines Zählers	Alternativ-Meßmethode
13	1. Unmoduliertes Mono-Signal 100 MHz in das Gerät speisen. 2. FM Muting-Schalter auf "ON /FM AUTO" stellen. 3. Zähler über einen Widerstand 100K ohm an **TP301** schließen. 4. **VR301** auf 19kHz ±30Hz einstellen.	1. Stereosignal entweder von einem Stereogenerator oder einem Sender einspeisen. 2. **VR301** so einstellen, bis die Stereolampe auf leuchtet. Schleifer von **VR301** sichern, wie in Abb. 2 gezeigt.

KANALTRENNUNG-ABGLEICH

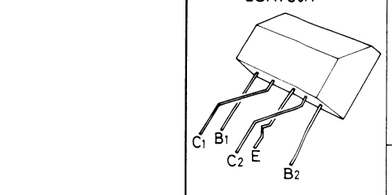
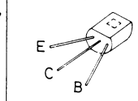
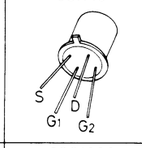
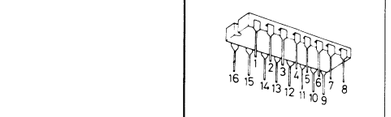
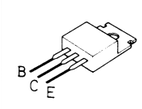
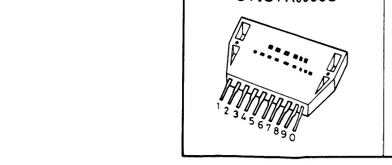
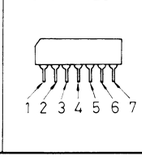
Anmerkungen:
1. Stereo-Modulator . . . . . Ansgang des Stereo-Modulators an den Eingang EXT MOD des Meßsenders schließen. Eingebauter Oszillator . . . . . 1kHz/Pilotton-Modulation 10%
2. UKW Meßsender . . . . . Auf etwa 100MHz einstellen. Ausgangspegel 72dB (IHF). Modulation FM
3. Bereichsschalter . . . . . FM
4. Muting/Mode-Schalter . . . . . ON/FM AUTO

	ANSCHLUSS DES UKW MESSENDERS	STEREO MODULATOR MODE oder MOD. RATE	ANZEIGE (Röhrenvoltmeter oder Oszillograph)	ABGLEICHSPUNKTE	ANMERKUNGEN
14	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	**L** (und R) Modulation 30%	Röhrenvoltmeter oder Oszillograph über Tiefpassfilter an den Tuner-Ausgang schließen.	VR302	• Auf min. Ausgang **rechter** (und linker) abgleichen.

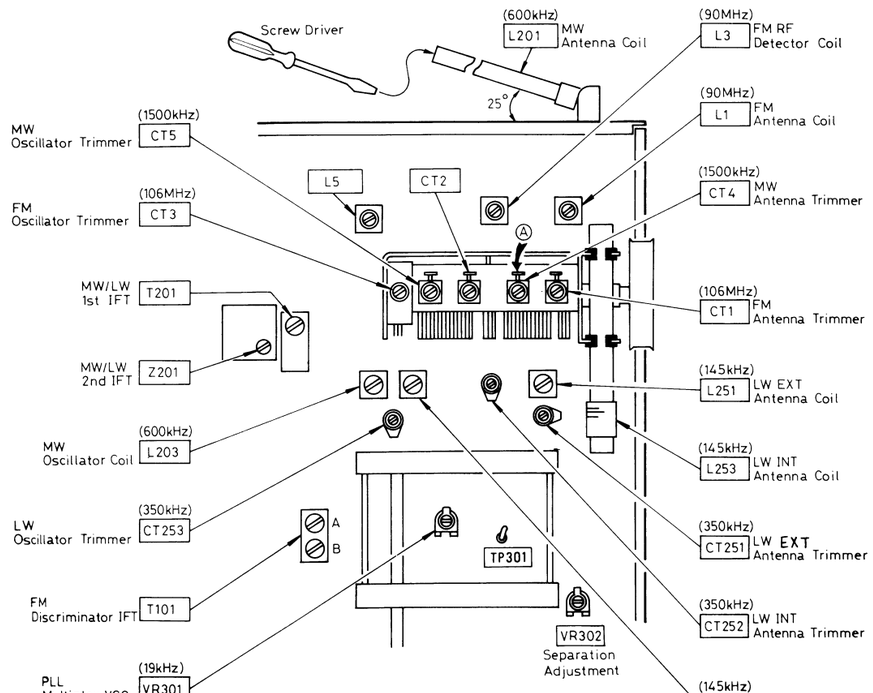
■ TONE, MAIN AMPLIFIER AND POWER SUPPLY PRINTED CIRCUIT BOARD



■ TERMINAL GUIDE OF TRANSISTOR AND IC

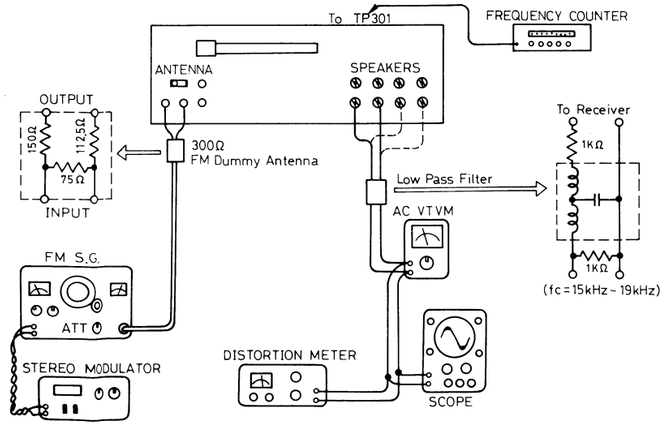
2SA798A 	2SA721 , 2SC828 2SC1047 , 2SC1675 2SC1685 , 2SC1885 
	3SK40 
AN217, AN363, AN377 	2SC1398 
SVISTK0039U 	SVITA7129P 

■ ALIGNMENT POINTS



POINT Ⓐ----MW/LW IF Input
TP301------19kHz Output

■ EQUIPMENT CONNECTION



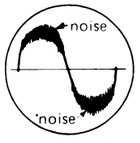
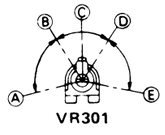


Fig. 1 (Abb. 1)



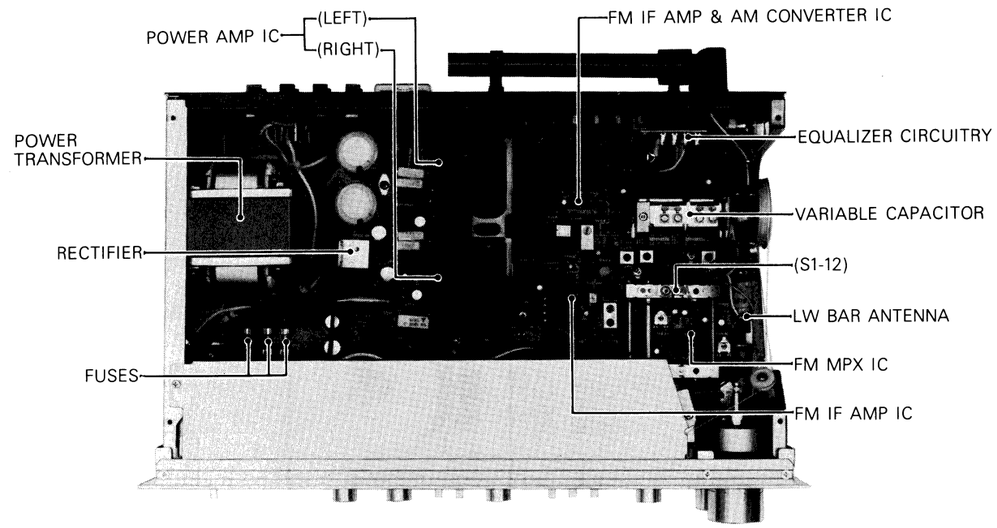
A – B, D – E: Stereo OFF Position.
B – D: Stereo ON Position (Indicator Lighting)
C: Adjust Point of Pilot Circuit.

Fig. 2 (Abb. 2)

■ NOTE

The unit is provided with the speaker circuit protection fuses at the right and left channels respectively. The fuse is to prevent the power IC from destruction, should the speaker terminals be short-circuited. Accordingly, if the unit fails to function upon completion of the speaker connections, check the speaker circuit protection fuses first of all for possible blowing.

■ INNER VIEW OF PRODUCT



■ TO REMOVE CABINET

1. Remove the two cabinet mounting screws (nos ①, ② screws in fig. 3).
2. Remove the four cabinet mounting screws (nos ①~④ screws in fig. 4).
3. Sliding it toward Ⓐ direction and lifting it upward Ⓑ direction as shown in fig. 4.
4. When the cabinet is installed, insert the metal fitting of cabinet (as shown in fig. 5) into the space between the front panel and light reflector.

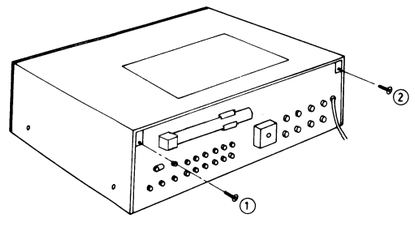


Fig. 3

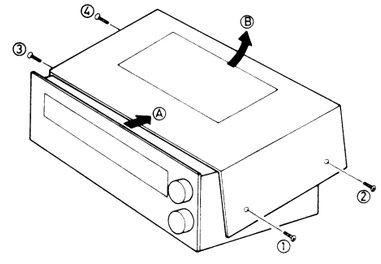


Fig. 4

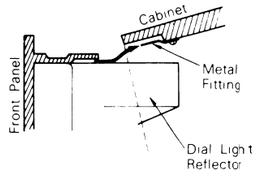
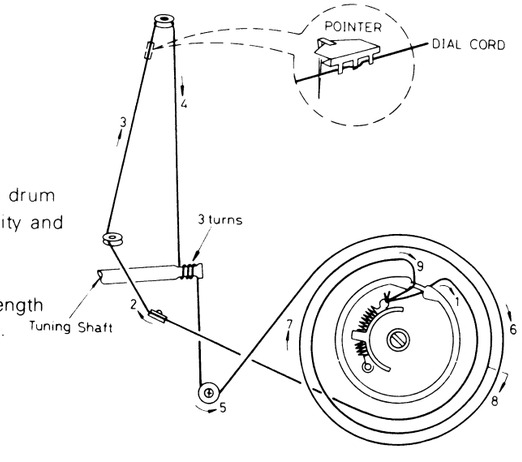


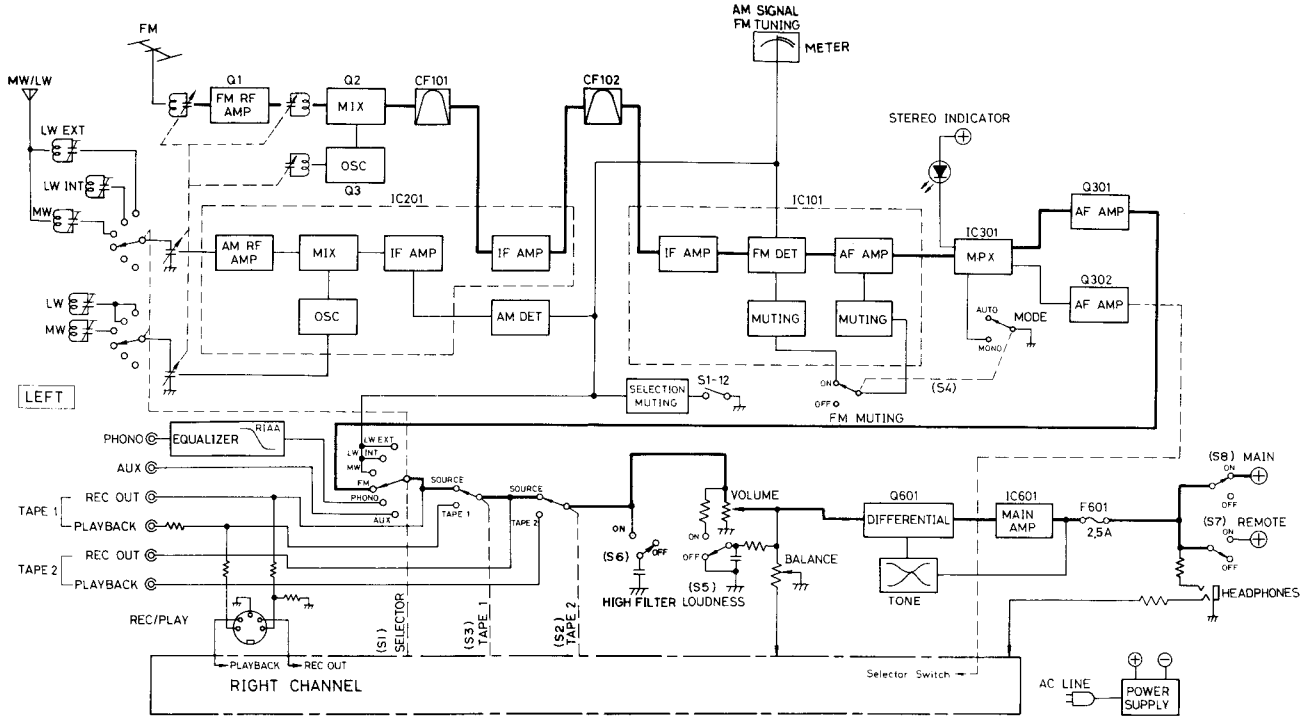
Fig. 5

■ DIAL CORD INSTALLATION GUIDE

- For threading a fresh cord, proceed as follows.
  1. Prepare a fresh cord more than 200cm(78-3/4") in length.
  2. Bring the variable capacitor into a state where the drum is completely turned to the right (maximum capacity and lowest frequency for the variable capacitor).
  3. Direct the cord in the order from 1 to 9.
  4. Stretch the cord in such a tension as the spring length is elongated by 1.5 times that of the original state.
  5. Fix the knot of the cord with the bond.



■ BLOCK DIAGRAM



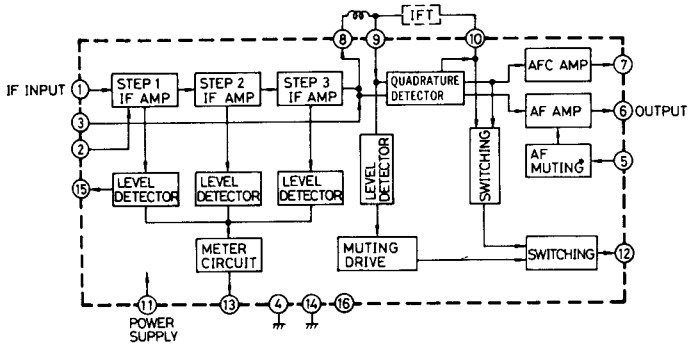
SA-300LK
(D), (XSW)

* The model SA-300LK (D) is available in European and Scandinavia only.
* The model SA-300LK (XSW) is available in Switzerland only.

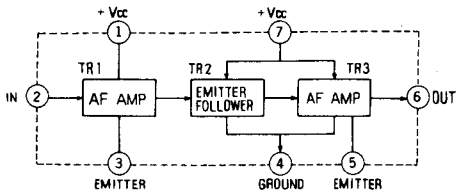
NOTE: This parts list included only the changes of the model SA-300L (D, XSW) parts list (page 16).

Ref. No.	Change of Part No. SA-300L ➡ SA-300LK		Part Name & Description	Per Set (Pcs.)		Remarks
			CABINET and CHASSIS PARTS			
2	SGWA300LD	SGWA300LKD	Panel, Front Ass'y	1		○
24	SGX6573	SGX6573-1	Bracket, Dial Scale Left Side	1		
25	SKD3512	SKD3513	Scale, Dial	1		○
26	SDH459A	SDH459-1A	Plate, Dial	1		
31	SGX6571	SGX6571-1	Bracket, Dial Scale Right Side	1		
33	SDP1129	SDP1129-1	Pointer, Dial	1		
53	SGP1350-3A[D,XSW] / SGPA300LE[XE,XGF]	SGPA300LKD	Rear Panel, SGP1350-3A with Name Plate (SGT17670)	1		○
			PACKING PARTS			
P6	SPG1699	SPG1703	Carton Box	1		○

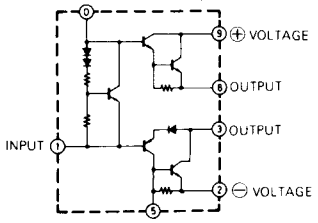
■ BLOCK DIAGRAM OF INTEGRATED CIRCUITS



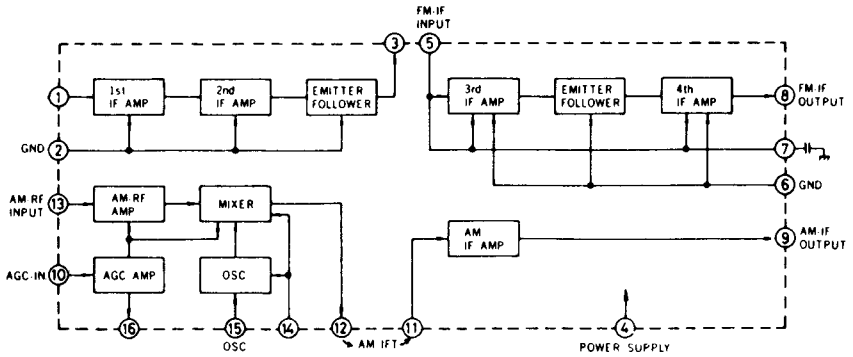
IC101 (AN377)
FM IF Amplifier & Detector



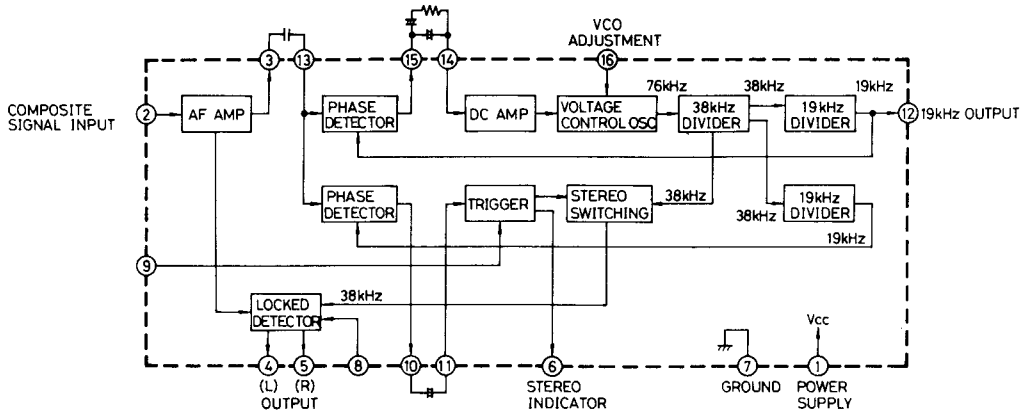
IC401, 402 (SVITA7129P)
Equalizer Amplifier



IC601, 602 (SVISTK0039U)
Power Amplifier



IC201 (AN217)
FM IF Amplifier & AM Converter



IC301 (AN363)
FM Multiplex

■ REPLACEMENT PARTS LIST ····· Electric Parts

NOTES: 1. Part numbers are indicated on most mechanical parts.
Please use this part number for parts orders.
2. ■ indicates that only parts specified by the manufacturer be used for safety.

Ref. No.		Part No.	Part Name & Description	Per Set		Remarks
INTEGRATED CICUIT						
IC101		AN377	IC, FM IF Amplifier & Detector	1		
IC201		AN217P-BB	IC, FM IF Amplifier & AM Converter	1		
IC301		AN363N	IC, FM Multiplex	1		
IC401 402		SVITA7129P	IC, Equalizer Amplifier	2		
IC601, 602		SVISTK0039U	IC, Power Amplifier	2		
TRANSISTORS						
Q1		3SK40-M	Transistor, FM RF Amplifier	1		
Q2		**2SC1047-C**	Transistor, FM Mixer (Use in ranks C or D)	1		
Q3		2SC1675-L1	Transistor, FM Local Osi Oscillator	1		
Q201, 281, 282		**2SC1328-T**	Transistor, Muting & AM AF Amplifier (Use in ranks S, T or U)	3		
Q301, 302		**2SA902S-F**	Transistor, FM AF Amplifier (Use in ranks F or G)	2		
Q601, 602		**2SA798A-G2**	Transistor, Differential Amplifier (Use in ranks F2 or G2)	2		
Q603, 604		**2SC1328-T**	Transistor, Current Mirror (Use in ranks S, T or U)	2		
Q605, 606		2SC1885-Q	Transistor, Pre Driver (Use in ranks Q, R or S)	2		
Q701		2SC1685-T	Transistor, Ripple Filter (Use in ranks S or T)	1		
Q751		**2SC1398-Q**	Transistor, Requlator (Use in ranks P, Q or R)	1		
Q752		**2SC1328-T**	Transistor, Requlator (Use in ranks S, T or U)	1		
DIODES						
D1		SVDMZ303CM	Diode, 3V Zener	1		○
D103, 151		MA150	Diode, Switching	2		
D281		SVDMA26-2	Dinde, Bias	1		
D301		LN25RP	Light Emitting Diode, Stereo Indicator	1		
D601, 602		MA27B	Diode, Current Mirror	2		
D603		SVDMZ314	Diode, 14V Zener	1		
D701	■	SVDS4VB10	Rectifier	1		
D702	■	**SM112**	Rectifier	1		
D751		SVDMZ414	Diode, 14V Zener	1		
COILS and TRANSFORMERS						
L1		SLA4P25	Coil, FM Antenna	1		
L2		**RLQY25S2**	Coil, Choke	1		
L3		SLD4P13	Coil, FM RF Detector	1		
L4		**RLQY15G5**	Coil, Choke	1		
L5		SLO4P31	Coil, FM Local Oscillator	1		
L101		SLQX180-2	Coil, Choke	1		
L201		SLF2D45-1	Coil, MW Bar Antenna (w/Bracket)	1		○
L202		SLO1C3	Coil, LW Local Oscillator	1		
L203		SLO2C9	Coil, MW Local Oscillator	1		
L204		SLQX101-2D	Coil, Choke	1		
L251		SLA1C5	Coil, LW INT Antenna	1		
L252		ELQ393D599G	Coil, Choke	1		
L253		SLF1C1	Coil, LW Bar Antenna	1		

Ref. No.		Part No.	Part Name & Description	Per Set		Remarks
L601, 602		SLQY15G-3P	Coil, Power Amplifier Output	2		
T101		SLI4D513-3	Transformer, FM IF Detector	1		
T201		SLI7D101-M	Transformer, AM IF (455kHz)	1		
T201 [XE]only		SLI7D103-M	Transformer, AM IF (470kHz)	1		
T1001	■	SLT5P145-W	Transformer, Power Source	1		
T1001 [XE]only	■	SLT5P147-W	Transformer, Power Source	1		
COMPONENT COMBINATIONS						
Z1		EXRP102Z223C	Component Combination, 22kΩ & 0.001μF	1		
Z2		EXRP103P102C	Component Combination, 1kΩ & 0.01μF	1		
Z101		EXF3SL04C	Component Combination, 0.01μF (X3)	1		
Z201		SLI9F101-Z	Component Combination, AM Detector	1		
Z203		EXBH85005K	Component Combination, Resistors	1		
Z301		EXBH88007K	Component Combination, Resistors	1		
Z302		EXA6YD04CL	Component Combination, 3.9kΩ (X2), 100kΩ (X2), 820pF(X2)	1		
Z401, 402		EXA6SD01C	Component Combination, Equalizer	2		
Z701, 702		EXRFS203ZS	Component Combination, 0.01μF (X2)	2		
CERAMIC FILTERS						
CF101, 102		SVFE107MS8-A	Ceramic Filter, Red, 10.7MHz	each 2		
		SVFE107MS8-B	Ceramic Filter, Blue, 10.67MHz			
		SVFE107MS8-C	Ceramic Filter, Orange, 10.73MHz			
		SVFE107MS8-D	Ceramic Filter, Black, 10.64MHz			
		SVFE107MS8-E	Ceramic Filter, White, 10.76MHz			
		(Use pair ranks as same as CF101 and CF102.)				
VARIABLE RESISTORS						
VR1		EWFMKA031BF5	Volume Control, 250kΩ (B)	1		
VR2		EVHGPAF25G25	Balance Control, 200kΩ (G)	1		
VR3, 4		EWKB9AF25C15	Bass & Treble Control, 100kΩ (C)	2		
VR101		**EVLS3AA00B54**	Muting Level Adjustment, 50kΩ (B)	1		
VR301		EVTS3MA00B14	PLL VCO Adjustment, 10kΩ (B)	1		
VR302		**EVLS3AA00B14**	Separation Adjustment, 10kΩ (B)	1		
VARIABLE CAPACITORS						
CV1~CV5 (CT1~CT5)		SVCC752J295A	Variable Capacitor, with Trimmer	1		○
CT251,252,253		ECV1ZW20X32	Ceramic Trimmer	3		
LAMPS						
PL1, 2, 3	■	XAMR62S	Lamp, Dial (6.3V 0.25A)	3		
FUSES						
F1	■	XBA2C31TRO	Fuse, T3.15A(250V) Power Source	1		
F1 [XE]only	■	XBAS2A3101	Fuse, T3.15A(250V) Power Source	1		
F2	■	XBA2C20TRO	Fuse, T2A (250V) Power Source	1		
F3	■	XBA2C10TRO	Fuse, T1A (250V) Power Source	1		
F4	■	XBA2C16TRO	Fuse, T1.6A (250V) Power Source	1		
F601, 602	■	XBA2C25SSO	Fuse, 2.5A(250V) Power Speaker Circuit	2		
SWITCHES						
S1		SSR135	Switch, Selector	1		
S2		SSL125	Switch, Tape Monitor 2	1		
S3		SSL121	Switch, Tape Monitor 1	1		
S4		SSL123	Switch, FM Muting/Mode	1		
S5, 6		SSL123	Switch, Loudness & High-Filter	2		
S7, 8		SSH223S	Switch, Speakers	1		
S9	■	ESL21191	Switch, Power Source	1		
S10	■	ESE37200	Switch, Voltage Adjustment	1		

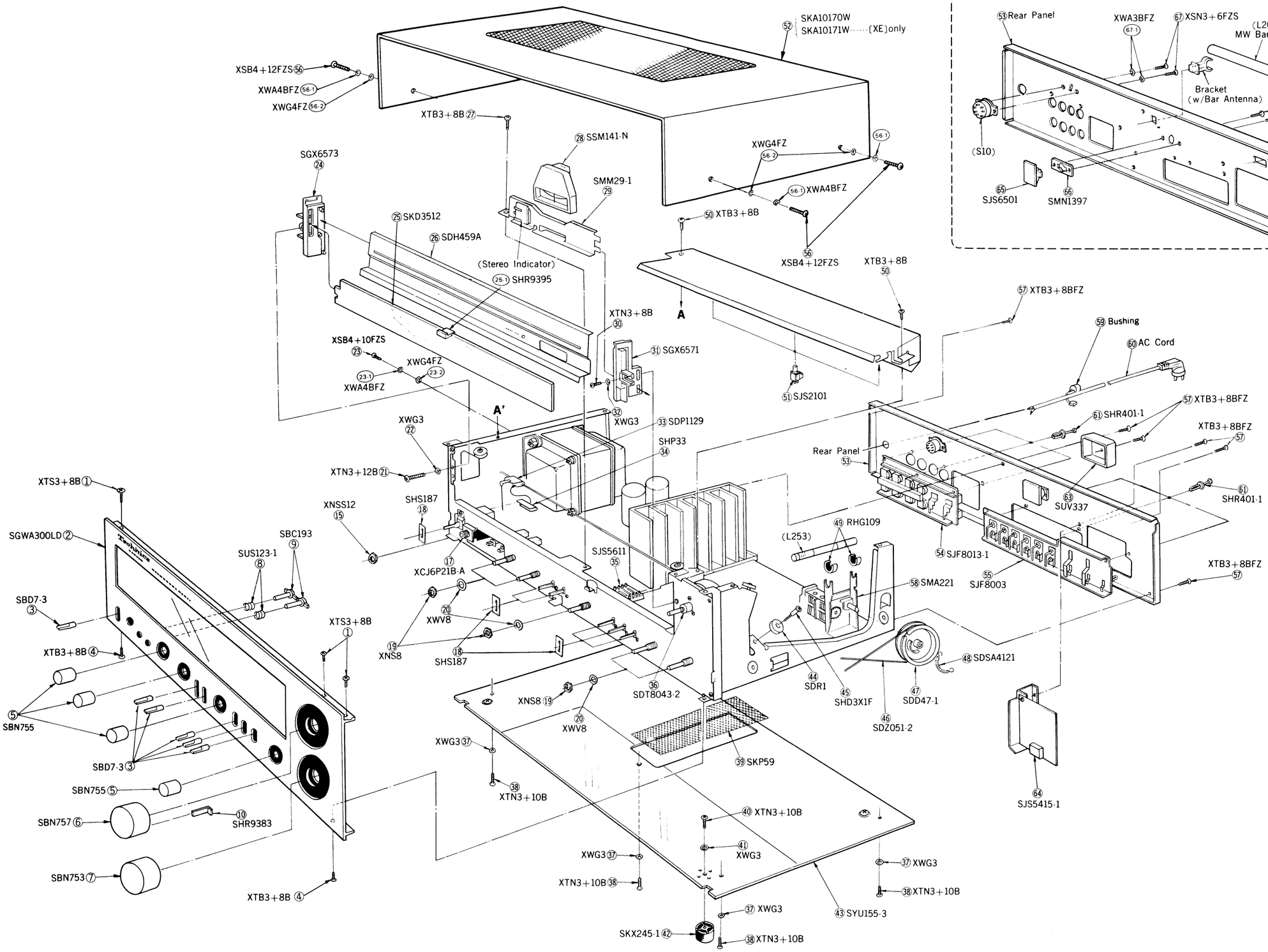
■ REPLACEMENT PARTS LIST ····· Cabinet & Chassis Parts

NOTES: 1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
2. S indicates that only parts specified by the manufacturer be used for safety.

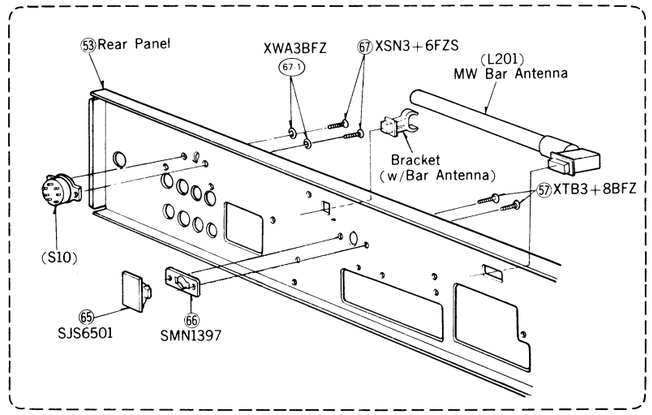
* (D) is available in Scadinavia and European only.
* (XSW) is available in Switzerland only.
* (XGF) is available in France only.
* (XE) is available in United Kingdom only.

Ref. No.		Part No.	Part Name & Description	Per Set		Remarks
CABINET and CHASSIS PARTS						
1		XTS3+8B	Screw, Front Panel M'tg	3		
2		SGWA300LD	Panel, Front Ass'y	1		○
3		SBD7-3	Knob, Lever Switches	6		
4		XTB3+8B	Screw, Front Panel M'tg	2		
5		SBN755	Knob, Bass, Treble, Balance & Selector	4		
6		SBN757	Knob, Tuning	1		
7		SBN753	Knob, Volume	1		
8		SUS123-1	Spring, Speaker Push Switches	2		
9		SBC193	Button, Speaker Switches	2		
10		SHR9383	Spacer, Tuning Knob	1		
15		XNSS12	Nut, Headphones Jack M'tg	1		
17		XCJ6P21B-A	Jack, Headphones	1		
18		SHS187	Shading Cloth, Lever Switches	6		
19		XNS8	Nut, Volumes & Selector M'tg	5		
20		XWV8	Washer, Volumes & Selector	5		
21		XTN3+12B	Screw, Dial Scale Left Bracket M'tg	1		
22		XWG3	Washer, Left Bracket Screw	1		
23		XSB4+10FZS	Screw, Power Transformer M'tg	4		
23-1		XWA4BFZ	Washer, Spring	4		
23-2		XWG4FZ	Washer	4		
24		SGX6573	Bracket, Dial Scal Left Side	1		
25		SKD3512	Scale, Dial	1		*○
25-1		SHR9395	Bracket, Dial Scale	1		
26		SDH459A	Plate, Dial	1		*
27		XTB3+8B	Screw, Meter Bracket M'tg	1		
28		SSM141-N	Meter, AM Signal & FM Tuning	1		
29		SMM29-1	Bracket, Meter	1		*
30		XTN3+8B	Screw, Dial Scale Right Bracket M'tg	1		
31		SGX6571	Bracket, Dial Scale Right Side	1		
32		XWG3	Washer, Right Bracket Screw	1		
33		SDP1129	Pointer, Dial	1		*
34		SHP33	Sheet, Pointer Slider	1		
35		SJS5611	Connector, 6pin	1		
36		SDT8043-2	Shaft, Tuning	1		*
37		XWG3	Washer, Bottom Board Screw	8		
38		XTN3+10B	Screw, Bottom Board M'tg	8		
39		SKP59	Ventilation Plate	1		
40		XTN3+10B	Screw, Feet M'tg	4		
41		XWG3	Washer, Feet Screw	4		
42		SKX245-1	Foot, Set	4		
43		SYU155-3	Bottom Board	1		*○
44		SDR1	Pulley, Dial Cord	4		
45		SHD3X1F	Screw, Pulley M'tg	4		*
46		SDZ051-2	Cord, Dial 200cm (78-3/4")	1roll		
47		SDD47-1	Drum, Variable Capacitor	1		
48		SDSA4121	Spring, Dial Cord	1		
49		RHG109	Rubber Cushion, LW Bar Antenna	2		
50		XTB3+8B	Screw, Reflection Cover M'tg	2		
51		SJS2101	Holder, Dial Lamp	3		
52		SKA10170W	Cabinet, Black Colour	1		
52 [XE]only		SKA10171W	Cabinet, Brown Colour	1		○
53 [D, XSW]		SGP1350-3A	Rear Panel	1		○
53 [XE, XGF]		SGPA300LE	Rear Panel, SGP1350-3A with Name Plate (SGT17650)	1		○
54		SJF8013-1	Terminal, Speakers	1		
55		SJF8003	Terminal, Input & Antenna	1		
56		XSB4+12FZS	Screw, Cabinet M'tg	4		
56-1		XWA4BFZ	Washer, Spring	4		
56-2		XWG4FZ	Washer	4		
57		XTB3+8BFZ	Screw, Rear Panel & Fuse Cover M'tg	10		
58		SMA221	Bracket, LW Antenna Coil	1		
59		SHR127	Bushing, AC Cord	1		
59 [XE]only		SHR129	Bushing, AC Cord	1		
60 [XE]	S	RJA45ZC	AC Cord, Power Source	1		
60 [D, XGF]	S	SJA97	AC Cord, Power Source, with Plug	1		
60 [XSW]	S	SJA111	AC Cord, Power Source, with Plug	1		
61		SHR401-1	Latch, Speakers & Input Terminal M'tg	6		
63		SUV337	Cover, Speaker Fuses	1		*
64		SJS5415-1	Connector, 4P (Equalizer P. C. B.)	1		
65		SJS6501	Socket, DIN (TAPE DECK, REC/PLAY)	2		
66		SMN1397	Bracket, DIN Socket	1		*
67		XSN3+6FZS	Screw, Voltage Adjuster M'tg	2		
67-1		XWA3BFZ	Washer, Spring	2		

■ EXPLODED VIEWS

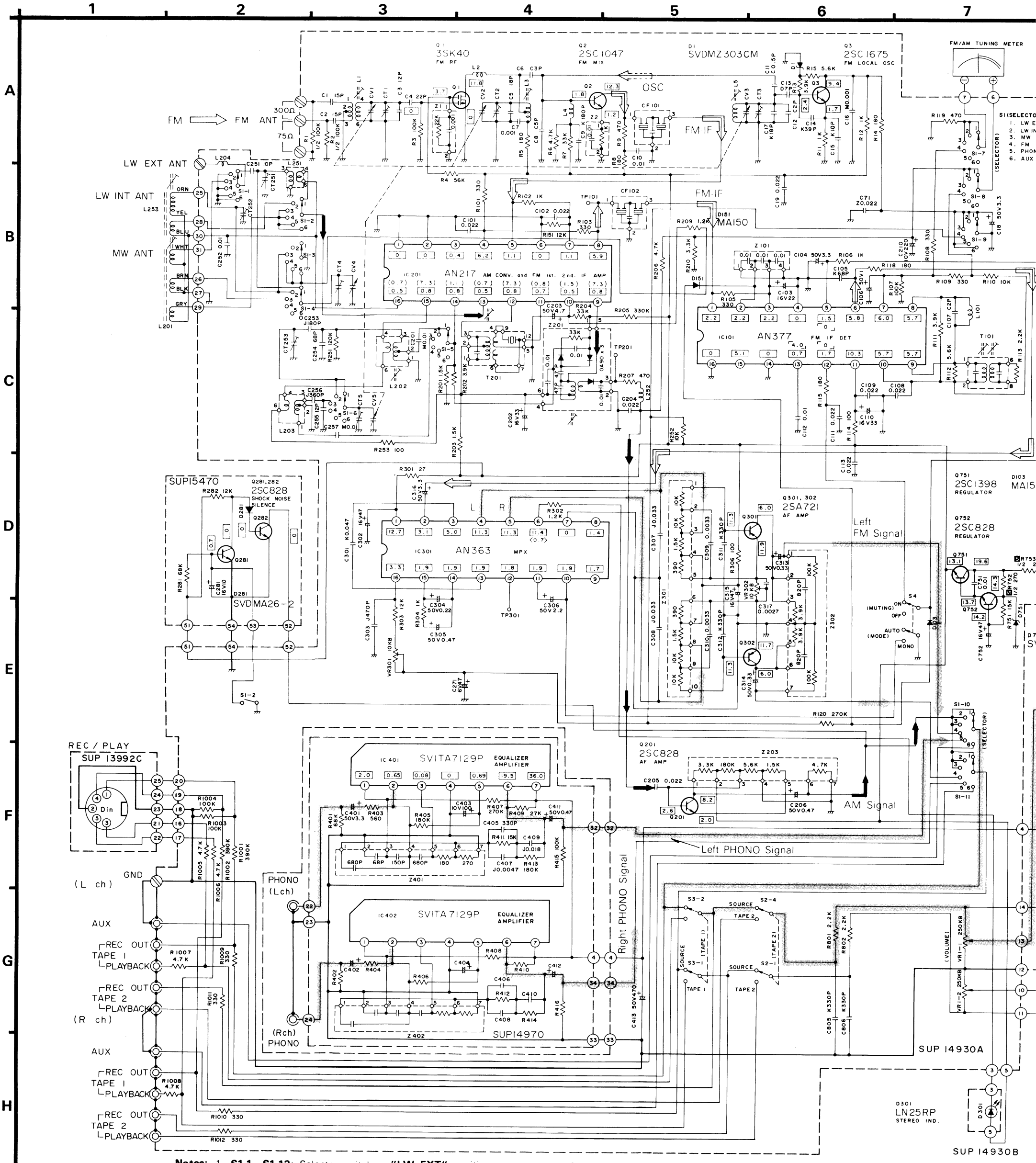


REAR PANEL



Schematic Diagram .... Model SA-300L/SA-300LK

(This schematic diagram may be modified at

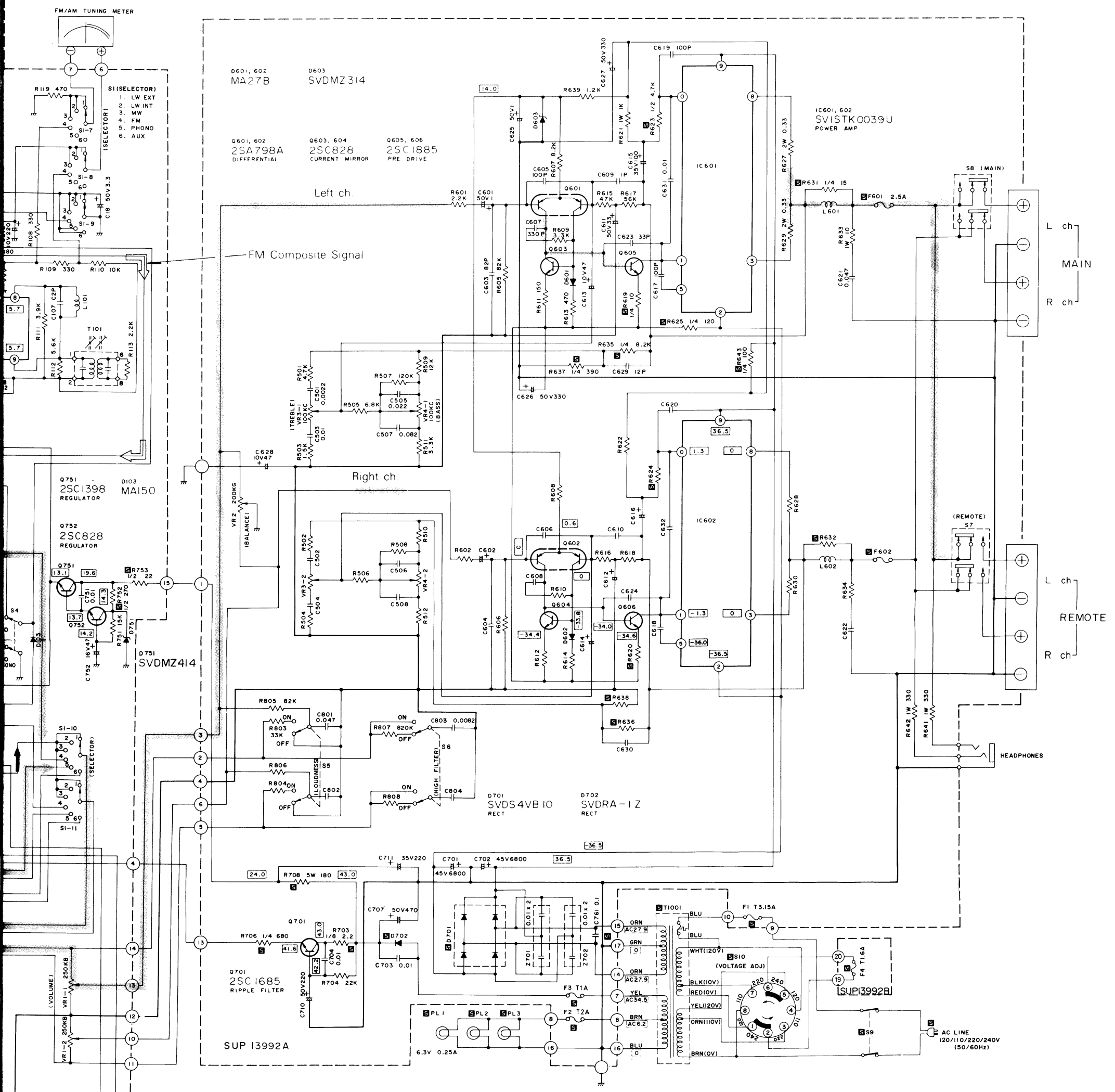


Notes: 1. **S1-1~S1-12:** Selector switch in **"LW EXT"** position.
①LW EXT ⟷ ②LW INT ⟷ ③MW ⟷
④FM ⟷ ⑤PHONO ⟷ ⑥AUX

2. **S2-1, S2-4:** Tape monitor 2 switch in **"SOURCE"** position.
3. **S3-1~S3-4:** Tape monitor 1 switch in **"SOURCE"** position.
4. **S4:** FM muting/mode switch in **"ON/AUTO"** position.
5. **S5-1, S5-2:** Loudness switch in **"OFF"** position.
6. **S6-1, S6-2:** High-filter switch in **"OFF"** position.
7. **S7-1, S7-2:** Remote speaker switch in **"OFF"** position.
8. **S8-1, S8-2:** Main speaker switch in **"ON"** position.
9. **S9:** Power source switch in **"ON"** position.
10. **S10:** Voltage adjustment switch in **"240V"** position.
120V ⟷ 110V ⟷ 220V ⟷ 240V
11. Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
[ ] Not apply signal to set and muting switch to OFF condition.
( ) AM signal reception.
r ⌟ FM muting to ON condition.
⟨ ⟩ FM stereo signal reception.
12. **S** indicates that only parts specified by the manufacturer be used for safety.
13. Signal lines
⇨ FM IF &
➡ AM Sign
➡ AF Signa

gram may be modified at any time with the development of new technology.)

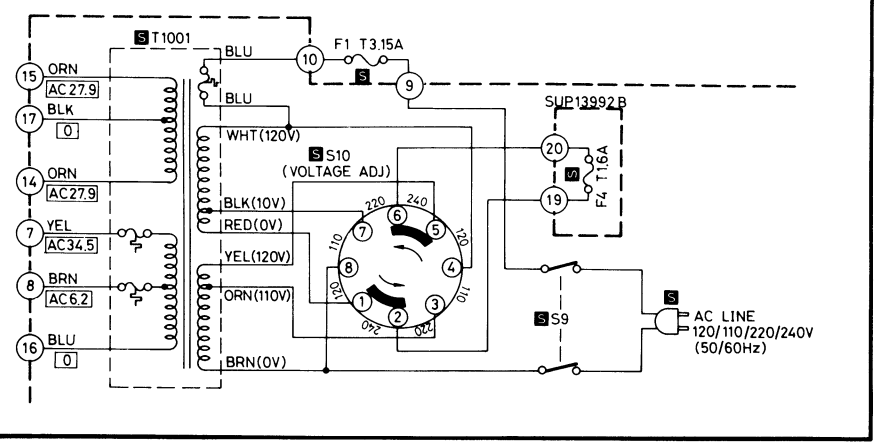
8 9 10 11 12 13



13. Signal lines
- FM IF & Composite Signal
- AM Signal
- AF Signal

Ref. No.	Production Part	Standard Part
Q201, 281, 282, 603, 604, 752	2SC828	2SC1328
Q301, 302	2SA721	2SA902S
D702	SVDRA-1Z	SM112

■ POWER SOURCE CIRCUITRY OF PRODUCT FOR UNITED KINGDOM (XE).



■ PARTS LIST OF RESISTORS AND CAPACITORS

Resistors

ERD ..... Carbon
ERO ..... Metal film
ERF ..... Non-flammable
ERG ..... Metal oxide
ERX ..... Metal film

Capacitors

ECC ..... Ceramic
ECQM ..... Polyester
ECE ..... Electrolytic
ECK ..... Ceramic
ECQS ..... Polystyrene
ECQH ..... Polyester

Ref. No.		Part No.
RESISTORS		
R1, 2		**ERD50TJ104**
R3		**ERD25TJ104**
R4		**ERD25TJ563**
R5		**ERD25TJ181**
R6		**ERD25TJ472**
R7		**ERD25TJ333**
R8		**ERD25TJ181**
R9		**ERD25TJ471**
R11, 12		**ERD25TJ102**
R13		**ERD25TJ392**
R14		**ERD25TJ181**
R15		**ERD25TJ562**
R101		**ERD25TJ331**
R102		**ERD25TJ102**
R103		**ERD25TJ331**
R105		**ERD25TJ331**
R106		**ERD25TJ102**
R107		**ERD25TJ104**
R108, 109		**ERD25TJ331**
R110		**ERD25TJ103**
R111		**ERD25TJ392**
R112		**ERD25TJ562**
R113		**ERD25TJ222**
R114		**ERD25TJ101**
R115		**ERD25TJ181**
R118		**ERD25TJ181**
R119		**ERD25TJ471**
R120		**ERD25TJ274**
R151		**ERD25TJ123**
R201		**ERD25TJ152**
R202		**ERD25TJ392**
R203		**ERD25TJ152**
R204		**ERD25TJ333**
R205		**ERD25TJ334**
R206		**ERD25TJ472**
R207		**ERD25TJ471**
R209		**ERD25TJ122**
R210		**ERD25TJ332**
R251		**ERD25TJ124**
R252		**ERD25TJ103**
R253		**ERD25TJ101**
R281		**ERD25TJ683**
R282		**ERD25TJ123**
R301		**ERD25TJ270**
R302		**ERD25TJ122**
R303		**ERD25TJ123**
R304		**ERD25TJ102**
R306		**ERD25TJ101**
R401, 402		ERO25CKG6802

Ref. No.		Part No.
R403, 404		**ERD25TJ561**
R405, 406		ERO25CKG1803
R407, 408		ERO25CKG2703
R409, 410		**ERD25TJ273**
R411, 412		**ERD25TJ153**
R413, 414		**ERD25TJ184**
R415, 416		**ERD25TJ104**
R501, 502		**ERD25TJ472**
R503, 504		**ERD25TJ152**
R505, 506		**ERD25TJ682**
R507, 508		**ERD25TJ124**
R509, 510		**ERD25TJ123**
R511, 512		**ERD25TJ332**
R601, 602		**ERD25TJ222**
R605, 606		**ERD25TJ823**
R607, 608		**ERD25TJ822**
R609, 610		**ERD25TJ332**
R611, 612		**ERD25TJ151**
R613, 614		**ERD25TJ471**
R615, 616		**ERD25TJ473**
R617, 618		**ERD25TJ563**
R619, 620	S	**ERD14FJ100**
R621, 622		**ERG1ANJ102**
R623, 624	S	ERD12FJ472
R625	S	**ERD14FJ121**
R627, 628	S	ERQ2CKR33
R629, 630	S	ERQ2CKR33
R631, 632	S	**ERD14FJ150**
R633, 634		**ERG1ANJ100**
R635, 636	S	**ERD14FJ822**
R637, 638	S	**ERD14FJ391**
R639		**ERD25TJ122**
R641, 642		**ERG1ANJ331**
R643	S	**ERD14FJ101**
R703	S	ERD18FAJ2R2
R704		**ERD25TJ223**
R706	S	**ERD14FJ681**
R708	S	ERF5SJ181
R751		**ERD25TJ153**
R752	S	ERD12FJ271
R753	S	ERD12FJ220
R801, 802		**ERD25TJ222**
R803, 804		**ERD25TJ333**
R805, 806		**ERD25TJ823**
R807, 808		**ERD25TJ824**
R1001, 1002		**ERD25TJ394**
R1003, 1004		**ERD25TJ104**
R1005～1008		**ERD25TJ472**
R1009～1012		**ERD25TJ331**

Ref. No.		Part No.
CAPACITORS		
C1, 2		ECCD1H150KC
C3		ECCD1H120KC
C4		ECCD1H220KC
C5		ECCD1H180KR
C6		ECCD1H030CC
C7		ECKD1H102MDA
C8		ECCD1H050CC
C9		ECCD1H181K
C10		ECKD1H103ZF
C11		ECCD1H0R5CC
C12		ECCD1H020CC
C13		ECCD1H070DC
C14		ECCD1H390KC
C15		ECCD1H100KC
C16		ECKD1H102MDA
C17		ECCD1H180KR
C18		**ECEA50Z3R3**
C19		ECKD1H223ZF
C71		ECKD1H223ZF
C101, 102		ECKD1H223ZF
C103		**ECEA1ES220**
C104		**ECEA50Z3R3**
C105		ECCD1H680K
C106		**ECEA50Z1**
C107		ECCD1H020CC
C108, 109		ECKD1H223ZF
C110		**ECEA1CS330**
C111		ECKD1H223ZF
C112		ECKD1H103ZF
C113		ECKD1H223ZF
C201		ECKD1H103MD
C202		**ECEA1CS330**
C203		**ECEA1JS4R7**
C204, 205		ECQM1H223KZ
C206		**ECEA50ZR47**
C210		**ECEA1AS221**
C251		ECCD1H100KC
C252		ECKD1H103ZF
C253		ECQS1181JZ
C254		ECCD1H680KC
C255		ECCD1H120KC
C256		ECQS1361JZ
C257		ECKD1H103MD
C261		ECKD1H100KC
C271		**ECEA1AS470**
C281		**ECEA1HS100**
C301		ECQM1H473KZ
C302		**ECEA1ES470**
C303		ECQS1471JZ

Ref. No.		Part No.
C304		**ECEA50ZR22**
C305		**ECEA50ZR47**
C306		**ECEA50M2R2R**
C307, 308		ECQM1H333JZ
C309, 310		ECQM1H332KZ
C311, 312		ECKD1H331KB
C313, 314		**ECEA50ZR33**
C315		**ECEA1ES470**
C316		**ECEA50Z3R3**
C317		ECQM1H272KZ
C401, 402		**ECEA50M3R3R**
C403, 404		**ECEA1AS101**
C405, 406		ECKD1H331KB
C407, 408		ECQM1H472JZ
C409, 410		ECQM1H183JZ
C411, 412		**ECEA50MR47R**
C413		**ECEA1JS471**
C501, 502		ECQM1H222KZ
C503, 504		ECQM1H103KZ
C505, 506		ECQM1H223KZ
C507, 508		ECQM1H823KZ
C601, 602		**ECEA50M1R**
C603, 604		ECCD1H820K
C605, 606		ECCD1H101K
C607, 608		ECKD1H331KB
C609, 610		ECCD1H010C
C611, 612		**ECEA1JS330**
C613, 614		**ECEA1AS470**
C615, 616		**ECEA1VS101**
C617, 618		ECCD2H101K
C619, 620		ECCD2H101K
C621, 622		ECQM1H473KZ
C623, 624		ECCD2H330K
C625		**ECEA50Z1**
C626, 627		**ECEA1HS331**
C628		**ECEA1AS470**
C629, 630		ECCD1H120K
C631, 632		ECKD1H103ZF
C701, 702		ECET45R6800Y
C703, 704		ECKD1H103ZF
C707		**ECEA1JS471**
C710		**ECEA1HS221**
C711		**ECEA1VS221**
C751		ECKD1H103ZF
C752		**ECEA1ES470**
C761	S	ECQH2105KZ
C801, 802		ECQM1H473KZ
C803, 804		ECQM1H822KZ
C805, 806		ECKD1H331KB

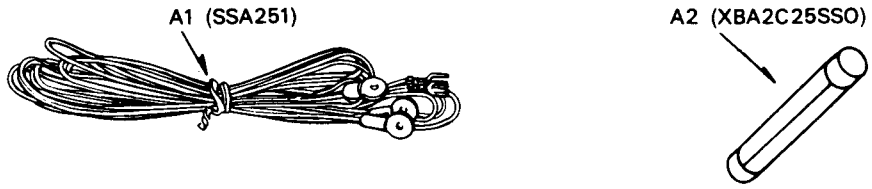
■ REPLACEMENT PARTS LIST

NOTES: 1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
2. ■ indicates that only parts specified by the manufacturer be used for safety.

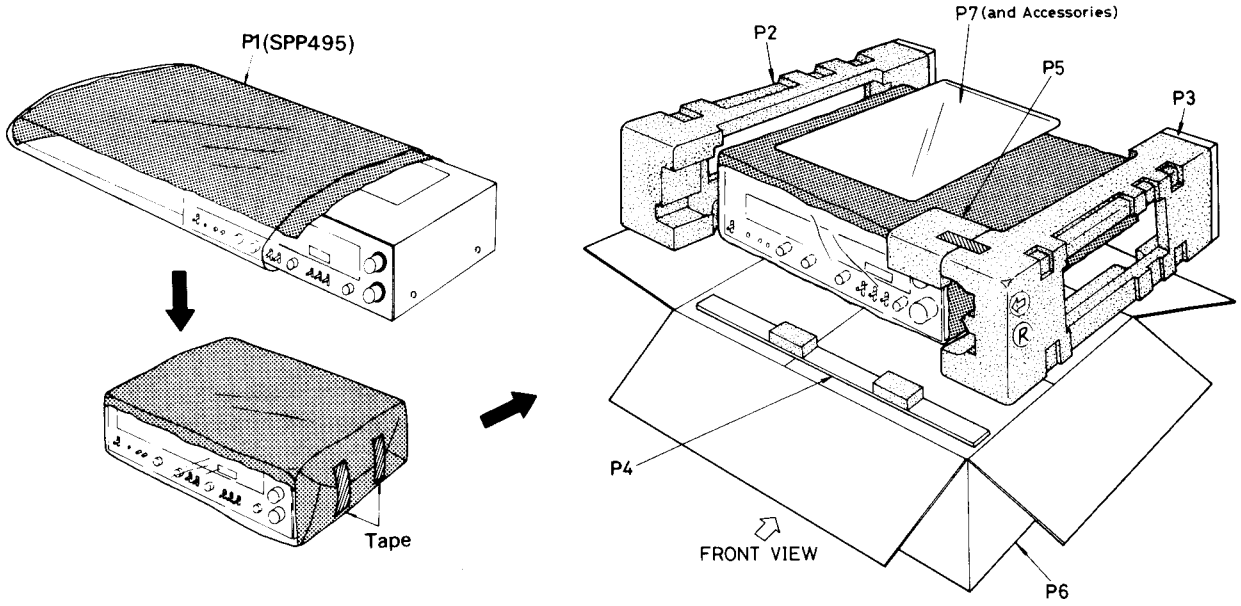
* (D) is available in Scadinavia and European only.
* (XSW) is available in Switzerland only.
* (XGF) is available in France only.
* (XE) is available in United Kingdom only.

Ref. No.		Part No.	Part Name & Description	Per Set		Remarks
ACCESSORIES						
A1		SSA251	Cord, FM Indoor Antenna	1		
A2	■	XBA2C25SSO	Fuse, 2.5A(250V) Speaker Circuit	2		
PACKING PARTS						
P1		SPP495	Polyethylene Bag	1		○
P2 [D, XGF]		SPS1591-2	Pad, Left Side	1		○
P2 [XE, XSW]		SPS1591-3	Pad, Left Side	1		○
P3 [D, XGF]		SPS1847-2	Pad, Right Side	1		○
P3 [XE, XSW]		SPS1847-3	Pad, Right Side	1		○
P4 [D, XGF]		SPS1651-1	Pad, Lower Side	1		
P4 [XE, XSW]		SPS1649-1	Pad, Lower Side	1		
P5		SPS1653	Pad, Right Front Side	1		
P6 [D]		SPG1699	Carton Box	1		○
P6 [XE, XSW]		SPG1701	Carton Box	1		○
P6 [XGF]		SPG1711	Carton Box	1		○
P7		SQF10027	Instructions Book, Printed Matter	1		○
P7 [XE]only		SQF10029	Instructions Book, Printed Matter	1		○

■ ACCESSORIES



■ PACKINGS



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